APPENDIX C

TASK FORCE MEETING AGENDAS and NOTES

Proposed Agenda Day 1 – September 4
9:30 am – 5:00 pm

9:30 **Getting Started**–Donna Silverberg, Facilitator, DS Consulting

9:40 **Welcome and Introductions**–Bob Lohn, Regional Administrator, NOAA Fisheries

10:00 **Review Agenda for Day and Task Force Logistics**—Donna Silverberg

10:30 **Getting Grounded: Why Are We Here?**

- NOAA and others will provide background presentations to help ground the group in the relevant pinniped-fishery issues
    - 10:30 Overview of Task Force Assignment and the Marine Mammal Protection Act, Section 120 –Garth Griffin, NOAA
        - What is its purpose? How has it been used?
        - Questions and Answers
    - 11:00 California Sea Lions: Life History and Status—Sharon Melin, NOAA
        - Questions and Answers
    - 11:30 Columbia River Salmon: Population Status and Recovery Plans
        - Scott Rumsey, NOAA will review salmonid populations
        - Elizabeth Gaar, NOAA will review Columbia Basin recovery plans
            - Questions and Answers

12:30 **LUNCH BREAK** (lunch will be provided for Task Force members)

1:30 **Getting Grounded: Continued**

- 1:30 Interactions Between Sea Lions and Salmon: Review Monitoring Information of Pinniped and Fish at Bonneville Dam since 2002—Robert Stansell, USCOE
    - Questions and Answers

- 2:00 What Has Been Done So Far? Review non-lethal deterrence measures (from past to present)—Brent Norberg, NOAA, Robin Brown, ODFW, Steve Jefferies, WDFW
    - Questions and Answers

- 3:00 Review of the States' Petition for Lethal Removal-Charlie Corrarino, ODFW and Sandra Jonkers, WDFW
    - Questions and Answers

3:45 **Break**

4:00 **Beginning Task Force Business**: Focus on the Instructions and Develop Game Plan—Given what has been outlined throughout the day, the task force will discuss priorities, timelines, and protocols to assist its work together.

4:50 **Brief Evaluation of the Day**

5:00 **Adjourn**

Day 2 – September 5, 2007
8:30 am – 4:30 pm

8:30 **Welcome and Opening Thoughts**—Donna Silverberg and Task Force

8:45 **Working Through the Issues: Task Force Discussion**
The Task Force will begin to focus on the issues that are presented by pinniped-fishery interaction in the Columbia River. Over the course of the three scheduled sessions, the group will need to discuss each of the seven questions outlined in the Task Force Instructions. During this agenda period, the group will discuss:

- Do any of the questions need further information?
- Is there additional information that will need to be gathered and distributed to the task force to aid in its recommendation?
- Are there other relevant issues or questions the Task Force feels should be addressed through this process?

10:00 **Break**

10:15 **Question Number One:**
(1) What criteria does the Task Force recommend to assist NMFS in the interpretation of "significant negative impact" and the extent to which pinnipeds are causing undue injury or impact to, or imbalance with listed species?

12:15 **LUNCH BREAK** (lunch will be provided for task force members)
1:15 **Question Number Two:**
(2) If available and practicable, what non-lethal measures does the Task Force recommend be taken prior to implementing lethal removal?

3:15 Break

3:30 **Develop Assignments**

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To make the next two day session productive, the Task Force members will discuss what additional information they may need and make assignments for any actions that may have been identified during the course of the day.

4:15 **Evaluate Session and Closing Comments**

4:30 **Adjourn**

Please note: the following questions will need to be addressed at the next two day session:

(3) If lethal removal is included in the recommendations, what criteria did the Task Force use to individually identify the specific animals to be removed and which animals meet those criteria at the time the Task Force completed its deliberations?

(4) If lethal removal is included in your recommendation, does the Task Force recommend a limit to the number of sea lions that may be removed and if so what is the justification for that limit?

(5) If lethal removal is included in the recommendations, what limitations (if any) would the Task Force recommend on timing, location, take methods or duration of the authorization?

(6) For purposes of post implementation evaluation, what criteria does the Task Force recommend for evaluating whether the implementation of the Task Force recommendations have been successful in addressing the pinniped-fishery interaction?

(7) Regardless of the outcome of this process, what might be the most effective means to achieve a long-term resolution to the pinniped – fishery conflict?

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NOAA FISHERIES
Pinniped-Fishery Interaction Task Force
Facilitator's Summary Notes - FINAL

September 4 & 5, 2007
Double Tree Lloyd Center
Portland, Oregon

NOTE: The following notes are a summary of the initial meeting of the Pinniped-Fishery Interaction Task Force. Questions or clarifications about these summary notes may be raised to the facilitation team.

Task Force Members Present for All or Part of the Meeting: Daryl Boness (Retired Marine Mammal Scientist), Bruce Buckmaster (Salmon for All), Jody Calica (CTWS), Robert DeLong (NOAA), Patty Dornbusch (NOAA), Doug Hatch (CRITFC), Thomas Loughlin (Marine Mammal Scientist), Deb Mariott (LCREP), Barry McPherson (American Fisheries Society), Guy Norman (WDFW), Joe Oatman (Nez Perce Tribe), Dennis Richey (Oregon Anglers), Carl Scheeler (CTUIR), Tony Vecchio (Oregon Zoo), Paul Ward (Yakama Nation), Steve Williams (ODFW), Bob Willis (USCOE), Sharon Young (Humane Society of the US).

Task Force Alternates present for all or part of the meeting: Leslie Bill (CTWS), Chris Hathaway (LCREP), David Shepherdson (Oregon Zoo).

Technical Resources and Advisors present for all or part of the meeting: Robin Brown (ODFW), Charlie Corrarino (ODFW), Elizabeth Gaar (NOAA), Garth Griffin (NOAA), Sandra Jonker (WDFW), Steve Jeffries (WDFW), Bob Lohn (NOAA), Sharon Melin (NOAA), Brent Norberg (NOAA), Scott Rumsey (NOAA), Robert Stansell (USCOE).

Also present: Craig Bartlett (WDFW), Dave Colpo (PSMFC), Joe Frazier (Associated Press), Michael Gosliner (Marine Mammal Commission), Mike Holliman (Smith-Root), Charles Hudson (CRITFC), Mina Innes (Marine Mammal Comission), Clay Penhollow (CTWS), Jaime Pinkham (CRITFC), Jim Ruff (NPCC), Steve Sanders (Oregon Attorney General Office), Ron Suppah (CTWS), Matt Tennis (PSMFC), Sara Thompson (CRITFC), Keith Williams (WA), Charles Wiggins (OR), Bryan Wright (ODFW).

DS Consulting Facilitation Team: Donna Silverberg, Erin Halton and Robin Gumpert.

Day 1 – September 4, 2007

Getting Started, Welcome and Introductions
Donna Silverberg began the meeting with a review of the agenda for the day and clarified that she will be managing the process for the sixty days of task force work. She noted that the goals for this initial meeting were to clarify the process, ground the task force

with presentations from technical advisors, and begin deliberations on the questions outlined in the task force instructions. She acknowledged the rigorous schedule for the process and welcomed input from the task force on the report that will be submitted to NOAA, as they prepare a recommendation to the Secretary of Commerce. Silverberg encouraged the task force to take notes and ask questions throughout the day. She noted that materials had been provided to the task force prior to the meeting and said that written recommendations about additional information to be distributed to task force members were welcome from members of the public. She clarified that this process is set up for the task force members to deliberate amongst themselves and, as such, there would not be time for oral public testimony.

Bob Lohn, Regional Administrator, NOAA Fisheries, welcomed the task force and noted that the states' request is only the second time the Marine Mammal Protection Act (MMPA) Section 120 has been applied. He expressed hope that the task force would provide guidance to NOAA with their recommendations and clarified the need to either approve or deny the states' request for lethal removal. Lohn thanked the task force for volunteering their time. He noted his belief that the right people were appointed to the task force—bringing a good mix of expertise from a variety of perspectives to bear down on the issues at hand. Lohn recalled a time when sea lions were a species in poor condition. He suggested that the concerns raised by the states are the result of a successful recovery story. He expressed the desire to build on efforts made to restore the sea lion population while also dealing with the difficult management decisions needed to support continued salmon recovery. He articulated that NOAA intends to be aggressive with the tools they currently have, but will look at alternative measures to address sea lion predation on salmon. Lohn said he would look to the task force for advice on how to achieve success for both species.

Overview of the Task Force's Assignment and the Marine Mammal Protection Act's Section 120 Process

Garth Griffin, NOAA, gave a power point presentation describing the requirements of the Marine Mammal Protection Act's (MMPA) Section 120. He noted that the States and NOAA are required to make a recommendation to Congress as they examine the emerging conflict between pinnipeds. Griffin clarified that the request for lethal removal of pinnipeds must come from a state and noted that the MMPA pertains to interactions between both threatened/endangered salmonids and pinniped populations that are not at risk. He said that lethal removal would not be considered for at-risk pinnipeds that are under protection of the ESA and noted that defining "individually identifiable" will be critical to the process. Griffin clarified that NOAA seeks a recommendation that is informed by task force discussion and includes recommendations on non-lethal alternatives that are practicable. The task force will need to consider what else is at play in the ecosystem and what is appropriate for human/public safety. Griffin said the task force is also required to opine on how best to achieve success and to identify benchmarks by which success can be measured. He noted that the final report is due on Monday, November 5th and will be drafted by Donna Silverberg, DS Consulting with significant

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Task Force input and approval. Griffin's presentation is available online at: http://www.mediate.com/dsconsulting/pg17.cfm

Questions/Comments from task force members:

- Upon making a recommendation, is there a formal timeframe for response? A: NMFS has 30 days to approve or deny the states' request and if approved, begin implementation.
- Since the task force is only providing a recommendation, what obligations are there for NOAA to accept the recommendation? A: NOAA must consider the task force recommendations in its decision making process.
- The task force provides information and guidance; how would the process proceed if NOAA determines the guidance is not practicable? Would it still be included in NEPA analysis? A: The NEPA analysis will cover a range of alternatives, and the task force recommendations will be part of that analysis.
- The recommendation is sent to the Secretary of Commerce; who ultimately decides? A: Dr. Hogarth, NOAA's Assistant Administrator for Fisheries.
- Regarding the schedule, can we assume NEPA will be ready to engage by December, or does the NEPA analysis depend on the range of alternatives? A: The NEPA document review timeline will depend on what the task force recommends. The alternatives that are included in the document will be taken into consideration, but not until the task force is done with its work.
- Regarding protection of 'catch' and safety issues, are these addressed in the list of seven questions? A: A document on what was considered in the creation of statute was provided to task force members. The task force can choose to expand the set of considerations as it sees fit. The additional questions put to task force members were formulated from information NOAA had about what the creators of the amendment considered. At that time, there was no issue with public safety.
- Comment: Section 120 includes a report on interaction between pinnipeds and other species up/down the west coast. Prior to 1994, fishermen were free to kill pinnipeds if there was damage to gear/catch—that is no longer allowed and is addressed in a separate section of the MMPA.

California Sea Lions: Life History and Status

Sharon Melin, NOAA, gave a power point presentation on the life history of California sea lions. She provided details on sea lion's physical characteristics, reproductive statistics, migration trends, mortality, and territorial traits.

Melin noted that male sea lions typically hold their territory for 2-3 years, but may hold their territory for up to six years. She clarified that historical population trends are unknown, as monitoring began in 1975, with marking initiated in 1987 and surveys initiated at San Miguel Island in 1990. Melin noted that what we do know is that the population level is around 238,000 and population growth is primarily influenced by pup and yearling survival, with el niño, predation, biotoxins, disease, and human interactions as additional factors. The primary causes of sea lion mortality are starvation and disease: biotoxins and disease have been a big source of mortality for the last decade and can lead

to reproductive failure as well. She also noted that hookworms have been causing increased mortality and are density dependent in a growing population. Additionally, urogenital cancer leads to mortality and affects reproduction. Estimated human caused mortalities from 2000-04: 159 annual that were fisheries-related, 74 annual non-fisheries related, totaling a minimum 233 annual mortalities. In 2005, the estimate of human caused mortalities was 235 animals. She also noted that the current Potential Biological Removal (PBR) level (the maximum level of human-related mortality which will not have a significant impact on the overall population) is estimated at 8,511. Melin's presentation is available online at: http://www.mediate.com/dsconsulting/pg17.cfm

Questions/Comments from task force members:

- Is there a tendency for sea lions to migrate north as they age? What trends have been observed? A: A range of ages has been observed in northern areas. Moving north has been a part of the gradual shift associated with population expansion and is indicative of the need to expand due to a bigger population size. Generally, cold ocean regimes are better for California sea lions as the nutritional plan tends to be greater during these periods. A shift was observed in 1999 to more sea lions traveling to colder areas. These groups of sea lions found abundant prey patches in these regions. Sea lions likely will continue to visit these areas as long as there is abundant fish spawning in those areas.
- Are there marked animals at Bonneville? A: Yes, they do make it that far.
- Why would a male sea lion not return to its established territory? A: If it doesn't return, it is because it has been 'kicked out' by another male.
- Are counts done annually? What are the models used? A: Yes, annual counts continue and work is underway on an age and sex specific model to use for accumulating data. Melin clarified that the PBR is a tool used for the human-caused mortality rate. For each species, the PBR number places a conservative parameter/guideline for how many animals could be removed without adversely affecting their optimal population size; if human-caused mortalities stay below this threshold, they won't affect the overall population growth.
- Are males and females equally susceptible to hookworm? A: Yes
- If the effect of hookworm on the population subsides, do you expect a 'boom'? A: we believe we are reaching a maximum population; juveniles are most affected by disease and we're not seeing signs of malnutrition in pups - in fact, pups are weighing more in the last two years.
- Why are human-caused mortalities noted as "poorly estimated" in the presentation? What level of confidence do you have in the estimated annual total of 233? A: These estimates are based on data from fisheries that are self-reported; we suspect under-reporting of deaths. Sea lions are not listed as an MMPA strategic stock. There is more information to address the level of confidence available in the stock assessment reports, if requested.
- Will the states' request to remove up to 83 animals make a difference or adversely affect the sea lion population? A: It is unlikely to dramatically impact the growth of the overall population because other males are ready to "move in" to contribute to the population.

- What is the ratio of territorial males represented in the group coming into the Columbia River? A: We only see males that were marked as pups, so it is difficult to know where unmarked males come from. We think 29 individuals of 62 identified in the Columbia River are territorial and have access to breeding females.

Columbia River Salmon: Population Status and Recovery Plans

Scott Rumsey, NOAA, gave a power point presentation on Columbia River salmonid populations. He said that 5 of the 10 total listed populations of salmon and steelhead in the Columbia and Snake River basins are potentially affected by pinniped predation. Regarding the history of ESA listings of Columbia and Snake River salmonid stocks: in 1991 Snake River sockeye were listed, in 1992 fall Chinook were listed. A coast-wide review led to the 1997 listing of Snake River steelhead, Snake River spring/summer Chinook, and Upper Columbia River steelhead. In 1998 Lower Columbia River steelhead were listed. In 1999 Lower Columbia River Chinook, Upper Columbia River spring-run Chinook, Columbia River chum, and Middle Columbia River steelhead were listed. A coast-wide review was initiated in 2002 and a revised policy on how to consider hatchery stocks in ESA listing decisions was developed. The new "Hatchery Listing Policy," completed in 2005, provided that: (1) hatchery fish closely related to local naturally spawning populations are included in the "species;" (2) the potential positive and negative effects of hatcheries are considered in evaluating the extinction risk of natural populations; and (3) hatchery fish that are part of the "species" are included in a "threatened" or "endangered" listing. Rumsey said that the new policy, applied in the 2005-06 listing status updates for West Coast salmon and steelhead, generally did not result in a change in listing status of salmon and steelhead populations. The two exceptions are Upper Columbia River steelhead and Lower Columbia River coho which were listed as "threatened" rather than "endangered" due to the beneficial contribution of hatchery stocks in reducing the immediacy of extinction risk faced by natural populations. Rumsey referred the group to a chart of listed stocks that are protected under the ESA and graphs showing when those stocks pass Bonneville Dam and overlap with pinniped presence. He noted that Lower Columbia River steelhead, Lower Columbia River Chinook, Upper Columbia River spring-run Chinook, Snake River spring/summer Chinook, and Middle Columbia River steelhead are present at Bonneville Dam when pinnipeds are present. With few exceptions, the populations within these listed stocks are not meeting their viability targets, placing them at high risk due to their low abundance and productivity. Rumsey's presentation is available online at: http://www.mediate.com/dsconsulting/pg17.cfm

Questions/Comments from task force members:

- Are there other relevant hatcheries statistics? A: Over 50 hatchery stocks are at play, and 70% of hatchery fish within these ESUs are protected. Both listed and non-listed stocks pass over Bonneville during the time of pinniped presence.
- In terms of protection, are listed hatchery and wild fish equally protected? A: For "endangered" species all members of the listed species equally carry the full Sec. 9(a)(1) take prohibitions of the ESA. For 'threatened' stocks, there is flexibility under ESA guidance to promulgate special '4(d) take' rules which provide specific

exceptions to the take prohibitions for actions that benefit listed fish (i.e. allow managers to allow for harvest to control the amount of hatchery fish spawning naturally in certain areas.)

- Regarding the 70% of hatchery fish that are protected - is that abundance related? A: No. 70% of the hatchery stocks passing Bonneville Dam are protected. However, Rumsey did not know what the proportion of all fish returning over Bonneville Dam.
- Is there any litigation in process that would likely affect the stocks present at the time of pinniped predation? A: Directly, no. - Upper Columbia River steelhead was listed as "threatened" in 2006, but a recent Court ruling reinstated it to 'endangered' status. There is a pending lawsuit regarding the steelhead listings in California, but it does not specifically address the steelhead listings in the Columbia and Snake rivers.

Review of Columbia Basin Recovery Plans

Elizabeth Gaar, NOAA, gave a power point presentation on the purpose, approach, and status of salmon recovery planning in the Columbia Basin. She described recovery plans as a way to provide a blueprint and context for setting goals and priorities, while targeting limiting factors and the strategic use of resources. Gaar said recovery plans are organized by 'domains.' Each has a technical recovery team that identifies historical populations, makes recommendations on viability criteria for each population, and provides technical review of plans. This technical information is used in planning processes unique to each domain that are collaborative and often led by local groups, based on existing work, and, most often, supported by a broad base of stakeholders.

Gaar referred the group to slides on the status of northwest salmon and steelhead recovery plans; she highlighted that locally developed plans generally focus on tributary sub-basin actions, and that NOAA is developing mainstem hydro, harvest, and estuary modules for the Columbia Basin that will also be a part of each recovery plan to ensure that the full salmon life cycle and all threats are addressed. Gaar said the mainstem hydro and estuary modules are posted on the NOAA website; the harvest module will be posted soon and will include harvest rates from existing management regimes. She noted that monitoring and adaptive management will also be important components of recovery plans. Gaar also noted that the estuary module will be made available for public review and comment soon via a *Federal Register* notice.

Gaar said that avian and pinniped predation is addressed in the estuary module and highlighted for the group how the module assesses the relative priority of pinniped predation in relation to other threats in the estuary. The estuary module also asserts that meaningful estuarine survival improvements will require major investments and implementation of all 23 management actions. Gaar added that local recovery boards are very concerned about predation and appreciate the work that will be generated by the task force. Gaar's presentation is available online at:
http://www.mediate.com/dsconsulting/pg17.cfm

Questions/Comments from task force members:

- Is there a synthesis for all limiting factors, including those in other modules? How are they integrated? A: NOAA is working toward that; one example is the recovery plan for the upper Columbia, in which predation impacts are currently included in overall estuarine impacts.
- What defines a stream vs. an ocean stock? A: It depends on whether rearing takes place in streams or the ocean, and on whether they are yearlings.

Interactions between Sea Lions and Salmon: Review of Pinniped and Fish Monitoring Information at Bonneville Dam since 2002

Robert Stansell, USCOE, gave a power point presentation on information gained through pinniped monitoring at Bonneville Dam. Stansell said each observer at the project has an objective to estimate daily pinniped counts, time of their arrival and evaluate the effectiveness of deterrents. Stansell referred the group to graphs showing pinniped arrival taking place earlier each year, the number of salmonids caught by pinnipeds increasing each year, and pinniped take observed in other locations. He clarified that 2003-'05 calculations are corrected for the number of hours observed, and that they typically do a straight extrapolation; 2006-'07 monitoring occurred from dawn to dusk and the data needed very little expansion. He noted that fish sometimes escape from pinnipeds, which could contribute to the number of fish take observed in 2006-'07.

Stansell said that chinook and steelhead make up 80-85 % of pinniped take, with lamprey and sturgeon as additional species preyed upon. Sturgeon has been observed as take in the winter time frame, as early as December. Individually identifiable sea lions have been observed at Bonneville as late as June. Stansell said that some animals stay at Bonneville for a month at a time and that 50-60% of the observed animals have returned from year to year. In 2007 the Bonneville spillway became a "hot spot", as boats were not able to access the area when spill occurred.

The COE utilized a combination of deterrents in 2006-'07, with SLED's (Sea Lion Exclusionary Devices) installed at fish ladder entrances allowing fish to pass and deterring pinnipeds, for the most part (C404 being the exception.) Acoustic deterrents were also used, along with USDA land based hazing and state and tribal boat hazing. Stansell said hazing efforts have been more effective on Steller sea lions than on California sea lions; evidence of habituation has been observed in a number of animals hazed multiple times. It is estimated that 3-4,000 salmonids are taken each year, and assumptions can be made that the predation rate of 1-4% is applicable to the ESUs. Stansell closed by saying that the past two years of combined hazing/acoustics deterrence efforts have failed to reduce predation and take has increased in the morning and late evening hours: before and after the hazing time frame. Stansell's presentation is available online at http://www.mediate.com/dsconsulting/pg17.cfm

Questions/Comments from task force members:

- How many sea lions have been observed each year? A: Estimates for each year are: 2002: 31, 2003: 111, 2004: 105, 2005: 85, 2006: 85, 2007: 81.

- Is there any night observations? A: Yes, in 2004-05, for a very few hours, animals were observed hunting, but no take was observed. Limitations exist for night observation: night vision goggles provide too narrow a view and bright lights spook the animals – thereby preventing actual counts during night hours.
- Have seal crackers or bombs been used to deter animals? A: Yes, in 2005 – they chased the animals away, then they came right back to the next tailrace. Bomb use was limited due to the number of salmon passing at that time. Seal bombs were also extensively used by boat hazers in 2007, with limitations when fish numbers increased.
- Is the increase in take associated with an increase in overall population? A: Not sure. It is more likely associated with the longer time each animal is spending at Bonneville during the season.
- Can you clarify the specific area at Bonneville where they are hauling out or resting? A: The spillway, the corner collector, and any area where there is smooth water or concrete.
- Have efforts been made to haul away animals from the area? A: Yes, we explored the idea but have not yet implemented. A few animals were captured in 2007 at Bonneville and released along the Oregon coast and all returned to Bonneville within a week or so.
- Are there identifiable feeding territories? A: Yes, males tend to stay in one area, but if another area becomes more appealing, they will relocate. Pinnipeds prefer less competition for feeding, so they tend to stick to the same area.
- Comment: Tony Vecchio, Oregon Zoo, said that there may be opportunities for research through the zoo.

Review of Non-lethal Deterrence Measures from Past to Present:

Non-Lethal Take under the ESA and MMPA

Brent Norberg, NOAA, gave a power point presentation and said that the MMPA and ESA have similar goals: to restore depleted populations to their sustainable level, to recover at-risk species and address threats to their recovery. Both Acts incorporate take, and actions that are defined as 'take' for both include hunt, harass, capture, and kill. He noted that the ESA definition adds "harm, pursue, shoot, wound, kill, trap, capture, and collect". MMPA language states that there shall be limitations on the authorization for intentionally taking animals. Norberg clarified that for management purposes, MMPA section 109 only permits state, federal and local governments to cooperate and take marine mammals under certain specific situations: for the animal's welfare, for the protection of public health and welfare, and non-lethal removal of nuisance animals. This section has been applied in numerous instances, including the conflict at Ballard Locks. Norberg noted that prior to 1994 lethal take for protection of gear and catch was permitted for commercial fishers only. The 1994 amendments prohibited lethal take for protection of gear and catch , but still allowed for protection of person and expanded the authorization for use of non-lethal deterrence measures by all fishers, property owners, and to include damage to public property. In December of 2005, after observing the growth of pinniped populations all along the west coast and their movement into non-

traditional territory, a non-lethal deterrence workshop was hosted by NOAA Fisheries. Interim guidance was developed and is posted on the NOAA website: www.nwr.noaa.gov. The guidance includes a list of suggested techniques (both passive and active), and measures that cause no serious injury or mortality to pinnipeds. Norberg clarified that for threatened species, take prohibition and exceptions are established in regulations under section 4(d) of the ESA. For endangered species, take prohibition is established under section 9. Norberg's presentation is available online at http://www.mediate.com/DSConsulting/pg17.cfm

Non-Lethal Deterrance at Ballard Locks
Steve Jeffries, WDFW, gave a power point presentation on deterrence tools used at Ballard Locks. He said that in the 1980's efforts were made with gill nets, non-lethal harassment from boats and physical barriers. He noted that the tools used at Ballard are the same as the tools available today; a list of the tools used is included as appendix one to the states' application. Removal methods used included trap and haul; trap, hold and haul; and trap, hold longer and haul. Jeffries said that of the 50 animals removed from Ballard Locks, all returned; however, the removal process did generate good behavioral information. Jeffries' presentation is available online at http://www.mediate.com/DSConsulting/pg17.cfm

Recent Non-Lethal Deterrence at Bonneville Dam: Robin Brown, ODFW, gave a power point presentation on deterrence efforts at Bonneville Dam. He showed slides that illustrated the difference in scale between Ballard Locks and Bonneville Dam. Brown passed around physical examples of seal bombs and said that in 2005-'06 SLED's, dam, and boat based methods were all utilized and the results determined no effect on salmon predation. From March 1 to May 30, 2007, there were daily hazing efforts at Bonneville, including trap and transfer; no effect on California sea lion presence or predation was observed from these methods. Brown referred the group to a slide showing the amount of area the Bonneville observers cover and noted the difficulties in individually identifying sea lions from a boat's perspective. Brown echoed Stansell's assertion that Steller sea lions responded to hazing, and that California sea lions were a stronger presence and less affected, if at all, by hazing. He also noted that California sea lion movement tracking results showed animals that were captured and transferred returned to the area almost immediately. Brown's presentation is available online at http://www.mediate.com/DSConsulting/pg17.cfm

Questions/Comments from task force members:

- Can you say more about the experience gained from holding animals? A: Catching them is extremely difficult, as they weigh up to 1,000 pounds. They feed on 60 pounds of food per day. Holding the animals is expensive, and if they are un-neutered, they are aggressive toward other neutered animals. Most facilities that are willing to hold them want them to be on public display.
- Can you say more about the potential use of an electrified field barrier? A: It is untested on sea lions, although it has been tested on harbor seals. The electric field doesn't work in salt water, so finding captive holding facilities to test it is difficult,

and it has to go from shore-shore. It is a potential deterrent, but sea lions seem to overcome whatever is placed in their way as far as barriers. Guy Norman, WDFW, clarified that a proposed Smith-Root electric field is in the process of securing funding and receiving an independent review; the proposal will be presented to the Northwest Power and Conservation Council next week. If it is funded, it will be researched for a couple of years. The states will be meeting with Smith-Root at the end of December.

- Would the electric barrier have an impact on fish? A: Yes, and to be clear, there needs to be further examination of this option.
- At Ballard Locks, did the animals go after additional food sources in other places? A: Not that we observed.
- Looking at pre vs. post-pinniped removal data on salmon stocks at Ballard Locks – it wasn't until after 2000 that the population crashed. How do you explain that? A: There are fluctuating spikes in salmon runs and always a pool of fish that can return or spend more time out at sea. In 1991, the run counts were down, and they never returned.
- What hazing efforts are planned for next spring? A: Planning is in process, and we're working to be prepared to do various things. We can all agree that sea lions are very effective predators; hazing is very expensive and does not produce an effective gain. Because of this, we will continue to see the pool of known individuals increase.
    - Comment: Steve Williams, ODFW: we believe there is some potential value in hazing naïve animals.
- Can you say more about the significance of mile marker 85? A: It is the bottom end of the sturgeon breeding reserve, and has been identified as the bottom of the hazing zone. 95% of animals observed have been in that range; 50% of those are marked animals; all are eating lots of fish and it is reasonable to assume all animals in that area are preying on salmon.
- Did you consider deterrence with something that would make the animals sick (i.e. tainted fish)? A: We attempted taste diversion at Ballard Locks and it was not effective.
- Comment: Daryl Boness, Marine Mammal Commission, suggested reading "The Fatted Male Phenomenon", which studied males with increased blubber.
- Tony Vecchio, Oregon Zoo, offered to provide years of data on weight gain.
- As the predation rate has increased each year, what does that say about learned behavior? A: It suggests that if one animal finds a food source, the others notice and follow. There will be a predation problem for as long as the food source is available. It is possible that naïve animals, unaware of the food source, wouldn't travel up the Columbia to investigate on their own.
- What can be said about the estimation of as many as 1,000 animals in the area? A: At times there are up to 2,000 animals on the Columbia River Jetty, downstream form Astoria. The states have <u>estimated</u> there may be as many as 1,000 animals in the 145 mile stretch of river from the mouth up to Bonneville Dam based on counts in the lower river near Astoria, many years of observations on the river between Astoria and Bonneville Dam and Stansell's counts at Bonneville Dam. The increase in sea lion

presence at Bonneville from 2001-2003 directly correlates to the reduction of sea lion presence in the Willamette Falls area during that same time period.

Review of the States' Petition for Lethal Removal: Charlie Corrarino, ODFW and Sandra Jonker, WDFW, gave a power point presentation on the history of the states' application for intentional lethal removal of pinnipeds. Corrarino began by saying that the problem at Bonneville dam is new and acute. The pinnipeds are arriving earlier and leaving later. He noted that the number of animals lethally removed is expected to be less than 1% of the PBR and clarified that the petition does not ask for removal of exactly 83 animals, but that the figure is included in the petition as an estimate. He said that 2-4% of ESA listed stocks are being preyed upon and it has been determined, with little doubt, that non-lethal deterrents have not been effective. He clarified the states' perspective that taking no action will exacerbate the problem because it continues to worsen. He noted that the California sea lions are not ESA listed, nor MMPA depleted, strategic or at-risk. He also noted that the region has spent millions of dollars dealing with the other threats facing endangered salmon through hatchery reform, harvest management, and sub-basin and recovery plans. The states' believe that all threats must be addressed.

Jonker noted that the states see the small group of animals between mile marker 85 and the Bonneville Dam as an identifiable group of individuals for purposes of the Section 120 requirements. She added that said 50% of California sea lions observed at the dam are marked. Many of these animals have been observed repeatedly. The states' suggested approach is to use non-lethal deterrence with monitoring and evaluation (this has been done) prior to lethal action. A lethal removal approach would expect to be limited the first year and biological samples would be made available. Corrarino and Jonker's presentation is available online at http://www.mediate.com/DSConsulting/pg17.cfm

Questions/Comments from task force members:

- Corrarino's statement of "no action will exacerbate the problem" – Can you say more about that? A: Even with the actions that have been taken, we've seen the salmon run predation rate increase from 1% to 4%. We're inferring that if we continue to not take lethal action, the predation rate will continue to go up.
- Comment: 'exacerbate' might not be the best choice of words: the problem likely will continue, but we are not certain that it will worsen.
- Comment: the predation rate increase is affected by the salmon run count totals going down.
- Comment: the amount of fish eaten by pinnipeds in 2007 is the greatest on record.
- Comment: it seems that the learning curve of the pinnipeds continues to go up as well.
- Comment: There are wild Chinook that still come to the Warm Springs area, and we've introduced steelhead, and plan to reintroduce spring Chinook; in regard to the populations we're trying to boost, it seems disappointing that they may be eaten by unmanaged sea lions. The Warm Springs Tribes do not want to see the Chinook go

the way of Ballard Locks steelhead and our concern is for the investments of funds, community, and stakeholders. We need to properly address the issue of sea lion predation.

- In reading the language in the statute and comparing it to the states' petition, the state only addresses 'recovery' and not "decline or recovery". Why is this? A: The state addressed recovery, but according to Section 120 the task force authority is both.
- For say, sea lion C404, would the state committees take lethal action on this specific animal? A: They would begin with non-lethal action, then propose that the "individual group" is there to prey. If it is determined that the group is having a significant negative impact, then lethal removal could be applied. Further, if those from that group are identified elsewhere, lethal action could also be taken elsewhere. And, if an individual animal that had been identified as part of the "individual group" above marker 85 were seen elsewhere in the river, it could be killed elsewhere, not just at the Dam. Note: as to who would remove the carcass, it is too early to say, and it may be difficult to recover the carcass. The general approach is to link deterrent actions and follow the animal closely with recording and monitoring. There may be things in the states' petition that the task force finds it will not support, but this is the states' position on interpreting Section 120.
- Is there a perception that this group is to discuss and come up with an acceptable level of mortalities and/or predation? A: Obviously, from the states' perspective, a 4% predation rate is not acceptable. This group has it within their purview to make a recommendation as it sees fit. Currently, Section 120 is the only way for the states to move forward.
- Comment: if you look at the problem in terms of an "All-H" recovery process, one of the most critical pieces is that the salmon population is not increasing. All other Hs are being addressed with a degree of success. This is an action that can be taken as way to address the salmon decline.
- Comment: the task force has to provide parameters by which we could say whether actions have been successful. There is desire for a measurable impact, and if fish are to be recovered, it would be useful to have an understanding about what is a tolerable level of predation.
- Regarding a feedback mechanism, would there be adaptive monitoring and management? A: Yes.
- For the purposes of this process, is success measured by reducing the effect on salmon or by preventing an increase in the number of sea lions that come to Bonneville Dam to feed? A: As this process is breaking new ground, we will need to work adaptively, with a step-wise and measured approach, with a process to identify what works and what doesn't.

End of Day One: Timelines and Protocols

Donna Silverberg provided the task force with a process timeline and draft task force protocols for working together. She suggested that the task force review the documents and provide feedback on day two. She informed the task force that documents and presentations would be posted to the DS Consulting website.

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The task force members discussed their views on answering questions from members of the press: some suggested that making statements about what the group or individuals had said was unwise, as something may come up later in the process that increases their understanding and, as such, changes their initial position. Other task force members suggested that if an individual wanted to voice their own opinion, then they should make the choice for themselves. One member thought it important to stick to the facts when answering questions and explain only what one knows about process; another suggested directing press inquiries to Garth Griffin, NOAA, who could make a broad, general statement that sheds light on the status of process. Garth clarified that NOAA would provide a general description after each meeting that avoids attribution to any single member. Also, he urged anyone speaking to the press to be mindful of setting positions in stone by what is said. Donna thanked the task force for their questions throughout the day and the meeting was adjourned.

Day 2 – September 5, 2007

Welcome and Introductions/Task Force Protocols: Facilitator Donna Silverberg welcomed everyone to day two, and noted that day one's presentations were meant to ground the group in background information and that day two was for deliberation and discussion focused on the issues presented by pinniped-fishery interaction in the Columbia River. The group was given a copy of Section 120 and asked to refresh their memories about the task force instructions by looking at the NOAA memo to them. Additionally, Garth Griffin passed out the one piece of public comment received on Day One.

Silverberg distributed a document on using consensus to the task force and asked the group to use the "five-finger' indicator on the draft task force protocols (1 being full support and 5 being full decent); while the group displayed a majority of level 1 support for the document there was one exception from Robert DeLong, NOAA, who expressed doubt about the ability of the group to reach consensus. He explained that his doubt stemmed from his participation in the Ballard Locks process, where no consensus was reached.

Another task force member asked whether voting would be a part of this work effort, as it was for the Ballard Locks task force. Silverberg clarified that the group would use straw polls to determine what level of agreement they have on various issues. The group may reach consensus on many or all of the issues, she said, but there may also be areas where no consensus is reached that will need explanation of the individual task force members' positions.

Another task force member expressed concern over how the participation of Department of Commerce and state representatives on the task force may affect the evaluation of the states' application. Isn't there a conflict of interest having those who wrote the application as well as those who will judge it on the task force? Garth Griffin, NOAA,

clarified that neither of the NOAA representatives will be part of the group making the final recommendation to the Department of Commerce. He also noted that the statute itself suggests that the task force include representatives from the states. The state representatives noted that their application was broad and general and they hoped they could work together with the expertise represented on the task force to refine it and determine the details of implementation.

At the end of the day, all task force members were willing to support the Protocols moving forward and, as such, they can be considered a Consensus document.

Working through the Issues: Task Force Discussion on Additional Information Needed To Complete Its Tasks

Task force members were asked if any of the seven questions outlined in the Task Force Instructions needed further information or if there were other relevant issues or questions that should be addressed through this process. Questions generated by the task force for the States, NOAA, and the COE to consider between the first and second work session are summarized below (*note these questions were sent to the group on September 10*):

1) Additional threshold information is needed for all task force members to agree whether or not pinnipeds are having a 'significant negative impact' on ESA listed fish. The following information is needed about fish that are likely to interact with pinnipeds:

During the time of pinniped predation…

- What proportion of fish passing Bonneville are ESA listed?
- What is the status and trend of each of these stocks individually?
    - What are the most critical life history time frames for these stocks?
- How does delayed mortality factor in to concerns about the interaction?
- What is the percentage of pinniped predation on hatchery vs. wild fish?
- What is the age distribution of the fish taken?
- Do we have a sense if predation is heavier on one stock more than others?
    - Characterize them by status and susceptibility to predation.
    - Break them into smaller timeframes.

Other related threshold questions:

- What is the proportion of the other threats, impacts and limiting factors on the listed fish stocks (e.g. commercial, recreational & tribal harvest, hydro, habitat?)
- What actions are underway to alleviate these 'other' threats?
- What is the status of litigation underway in response to those threats (i.e. is it possible that other discussions will be impacting or changing the current threats to a degree that there is a likely impact on the pinniped-fishery interaction issue?)?
- How does the decline of fall stocks compare to those spring stocks impacted by pinniped predation? (note: graphic depiction was requested)

- How much take is allowed for tribal ceremonial harvest as compared with the amount of take by pinniped predation?

2) More information is needed on the following questions to assist future discussions and task force decision making:

- What will it take to deter the animals at Bonneville? As this is a recent phenomenon, what is the potential for impacting behaviors of other animals with lethal take?
    - What is the expected behavioral impact of the proposed action on naïve animals?
- What are other non-lethal alternatives that may be funded and/or implemented in the next few years? (*note: information on the Smith-Root info was sent to Task Force members on 9/6/07)*
- More trend analysis is requested on Stansell's data:
    - What impact might a total of 500-1000 sea lions at Bonneville have on the salmonid population? (Or, asked another way, what might be the impact on salmonids if 500-1000 sea lions moved in to Bonneville?)

- What information is available on marine mammals in the Willamette?
    - What can be said generally? Information on specific individuals? Are they also visiting Bonneville?

3) Further information was requested on the marked animals identified each year:

- How many animals are marked per year?
- How many are new each year?
- In terms of any decision to select individual animals to remove, the task force would like to see data on which marked animals were present during which years to determine from data sets which animals are the real 'culprits' (e.g. dossiers).

4) Is there any quantifiable data about the impacts to public safety that might assist the task force in answering questions related to this issue, given the increasing numbers of reported 'aggressive' sea lions?

5) What are the underlying objectives for what the proposed action is trying to accomplish?

- *Answer given at TF meeting: To ensure that predation on listed fish does not increase; to reduce predation back to a background level; and to do so with a minimal impact on the sea lion population.*

Group Discussion of Issues Presented

In its instructions to the Task Force, NOAA asked the group to consider "what criteria does the Task Force recommend to assist NMFS in the interpretation of "significant negative impact" and the extent to which pinnipeds are causing undue injury or impact to, or imbalance with listed species?" Before being able to answer this question, Guy

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Norman, WDFW, and Steve Williams, ODFW, provided the task force with an explanation of the states' approach for evaluating the issue:

Using the upper and lower Columbia ESU stocks as examples, they said that tagging and genetic information are analyzed and used to establish a database of population statistics and trends. They clarified that wild and hatchery fish may have different management applications and/or are afforded different levels of protection. Patty Dornbusch, NOAA, added that minimum abundance levels used in determining gaps between current and target population status represent a 95% probability of persistence over a 100 year time frame and are based on the work of the Technical Recovery Teams. For ESA recovery, not every single population in an ESU would need to meet this level (the TRTs also developed guidelines for how many populations would need to achieve that status). It was noted that COE research has concluded that pinniped predation is having an impact on all Columbia River stocks at the rate of 3-4%, and that the rate is evenly distributed amongst all stocks, both for hatchery and wild fish as they are co-mingled. Fish passage in the Columbia experiences a sharp peak in April-May; that crucial timeframe encompasses passage time for all stocks and is when the greatest seal lion abundance has been observed. It was also noted that commercial and recreational fisheries are kept at a 2% rate.

Comments/questions from task force members:

- Why did you reference 1% of PBR? What effect on the decline or recovery is being sought by choosing this? A: In the context of the states' application, if all the animals believed to be in the area at that time (about 50-100) were taken, it would still be no more than roughly 1% of the current PBR allowed by NMFS for lethal take of California sea lions resulting from other human activities. To clarify, this is a reference point to allowable PBR removals, not an objective of the state's proposal. The states are uncertain whether all animals would need to be removed and look to the task force for help with this.
- Sea lion predation is different from other limiting factors facing salmon in that it is an 'unchecked' impact – and the only means of regulating it is through this process.
- Predation is being addressed, it is just not being addressed to the extent that you would like; just as other factors in the declines are being addressed but not to the extent that one might wish.
- The overall recovery plan for Columbia River salmon is very complicated and expensive; measurable impact markers are very slight, but they are all part of working to make small differences in percentages and are all significant.
- Given what is known about sea lion behavior, as long as there is any predation by pinnipeds, it will spread. They learn from each other.
- Why not classify the sea lions as an invasive species?
- The task force is looking for a way to make a difference in pinniped predation that has the least long term impact on pinnipeds. There may be some trial and error.
- www.salmonrecovery.gov and the COE website are good resources for additional data reference.

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Group Discussion: How to Interpret or Define "Significant Negative Impact"
One of the keys to determining whether or not lethal take is appropriate is whether or not the individually identifiable sea lions' actions are posing a 'significant negative impact' on endangered salmon abundance. While the NMFS question refers to the criteria that the Task Force might recommend, the group began by discussing what 'significant' means.

Initial comments were put forward:

- The bottom line in all of this is the impact on salmon recovery (and a variety of basin needs) and the desire to get to some level of reduction in predation.
- The states' have already been through a process to get to this point. There is a fear that if we spend too much time thinking about what is valuable to consider it will be too late for salmon—just as it was at Ballard Locks.
- "Significance" is that the problem is growing and remains unchecked by current management actions—unlike the other impacts on salmon.
- If there's a disagreement about what is significant, we may want to remember that we can continue and measure losses over the long term. It is highly probable that the pinnipeds arrived at Bonneville following that big run of salmon in the early 2000's. If we could get rid of those who learned to follow the run, we may not see the problem arise again until another big salmon run arrives.
    - Pinnipeds at the dam also coincide with large smelt runs – so as we move forward, we'll need to focus on smelt as well as salmon movement.
- Suggest that having a fairly concrete objective like 1% of the run be taken by predation would allow for a simple measure of whether we have reached it or not.
- While skeptical at the outset, over the last two days, I believe that pinniped predation <u>does</u> have a significant negative impact on salmon abundance passing over Bonneville Dam.
- Yes – sea lion predation is clearly at a level that it wasn't before – and the graph brought in by Garth after lunch supports this. The 'undue impact' is hard to come to grips with –if there is a continual decline in salmon abundance, sounds as though we can't get down to the recovery level. However, willing to believe that this is new, is a problem, and if could be a sense of a target to get to, then the states' application makes sense.
- Do indeed see evidence of sea lions' negative impact on meeting the demands for salmon recovery. Something else is needed.
- While I agree that predation is higher than was previously, not sure I agree that the application is valid. I have not seen all evidence that indicates lethal removal is the right answer. More information on other factors impacting the salmon population is needed before we can begin to identify solutions.
- Still want to hear how predation is <u>significant</u> – how can we be sure that lethal removal will have a positive impact? Sounds like the request is for open-ended removal up to certain number. Because I care about the fish, I do want to see something done, but not at the cost of killing sea lions today only to find that

predation continues in the future as other animals move in. I need a high probability that actual good will come of this action – don't want to come back here and argue this again, with 80 sea lions dead.

- Sea lions are "unchecked" impactors – this is the real driver here in a region that is trying to "check" all other actions. Any amount of ability to regain balance would be an improvement while making minimal impact on pinnipeds.
- If there's a positive impact, and then other pinnipeds move in, then we haven't done anything. Look at BiOp for Bering Sea, Alaska trawl fisheries and other: you'll see an average of 11.5 and 23.5 of these runs in the Columbia being taken incidentally by Alaskan fisheries – and those are significantly higher than rates estimated for predation. That is an unconstrained take.
- One thing that may be helpful is to not get hung up on relative impacts, as we have gotten hung up on that in previous processes. Obviously, despite other limiting factors, we've got to get to recovery. Some of the impacts are in the control of people in this room, and some controls are embedded in treaties, but we have to deal with what can.
- The Committee Report on this section of the 1994 MMPA states that the committee recognized that a variety of factors may be contributing to the declines and intended that the current level of protection given to the marine mammals not be lifted without first giving careful consideration to these other factors.
- The Nez Perce Tribe has great experience with the effects of impacts over many years, and they acknowledge that this is an emotionally charged process. They have invested time for mitigation of lost harvest opportunities and recovery to achieve healthy, harvestable fish runs. It is beyond the ability of the task force to rope in regional and international fishery allocation issues over course of next few meetings. Our focus is on what sea lions are doing in relation to salmon recovery. We should not try and take on the duties of a salmon recovery board.
- We are always asking ourselves the question of how we're helping fish, with some uncertainty always about what effect other species may be having. In this case, we know that the pinnipeds are impacting salmon very directly. I see this process as part of a mix of actions/solutions, and we will have to evaluate or actions as we go to see if we're making progress. I do feel more comfortable that we're moving in the right direction.
- Acknowledge that if we can ask ourselves "did we reduce predation on salmonids in the lower Columbia River?", it may be easier to focus on our objective.
- We already know the estimated number of salmon that are being preyed upon each year. I feel that predation started with the big pulse of fish passing in 2000-'01, and I remain hopeful for the probability of success for this process.
- If the data on Columbia River stocks is used in a proportional relation to what would be a sustainable level for those runs, and we figure in the 4% predation rate that we know is a serious/significant impediment, we may come up with a metric number we could point to that helps us measure "significant impact."
- It is hard to quantify significant negative impact, short of a complete population viability analysis for both with and without sea lion influence. There are many

variables including the question of over how many years do you weigh the cost/benefits. Our issue is to answer what is the best course of action with the least impact on the sea lions that will still provide a benefit to fish.

- Everything we've heard over the last two days makes me expect that less than 80 animals would be lethally removed. While I am sympathetic to acknowledging the other impacts, it is the purview of this group to decide what to do about sea lion predation on salmonids. As far as what we can do to have an impact on predation, lethal removal is the most significant, and most cost-effective.
- I heard lots of emphasis on estimated salmon catch at the dams – to me, it is more about a level of magnitude and it has been hard to find meaning in the numbers so far in this process.
- Regarding the electric field deterrent alternative – the group should remember that option, although it is not going to be available this year or next.
- Regarding the "will deterrents work" question, given that this is an iterative process, it will be important to evaluate each non-lethal method, in a progression that goes from least impacting to more so.
- My experience with recovery process in the basin has shown me that one place to focus on is how to identify whether populations are at a viable level. For each population, a determination is made for viability, and the next step is to determine what the population is expected to do, given what we can do to provide benefits. With this approach in mind, if we did nothing regarding pinniped predation we'd be losing ground compared to what could otherwise achieve.
- My experience working on the Oregon Plan was based largely on examining contributions from a variety of sources, even if we couldn't quantify them. From that, political science suggests that doing something is better than doing nothing since voluntary contributions by others will likely reduce if we don't take action on a mortality source that people can actually see with their own eyes.
- A desire to see action was expressed. There are numbers of processes to protect fish and fish habitat. The region has been fighting for salmon with numerous processes involving tribes, agencies, plans, courts, states, managers, and has 50 projects currently going through FERC reviews. The key is the need to find a sense of balance – something that is reasonable and can be achieved.
- In this case, impacts should not be traded like a carbon credit – in that if 4% of salmon were eliminated, they would be non-transferable. We need to establish clearly in the final report that there's not a "carcass credit" and emphasize the desire to maximize salmon protection, minimize sea lion predation while also minimizing the impacts on the sea lion population.
- Pinniped predation <u>does</u> have an impact on our ability to recover salmon stocks and also impacts cultures, families, traditions, and has secondary species impacts. All of these factors are part of why we believe the predation on salmonids is significant.

Donna Silverberg noted that she heard a thread running through task force member comments: we can say that the sea lions are making an impact, that it is at least 4%, and it does need to be managed. In terms of putting our fingers on primary criteria, the question

of "will addressing the impact of pinnipeds on salmon assist in salmon recovery?" seems the most important to consider. Silverberg said she heard from the group that, outside of this process, there's been a regional belief emerging that this predator needs to be controlled, and that this iterative process needs to be a part of the final recommendation. Silverberg facilitated group word smithing on the following statements:

- The level of pinniped predation negatively impacts salmon recovery.
- A reduction in pinniped predation will significantly assist in salmon recovery.
- Predation on salmon by sea lions is not new, but the level of presence at Bonneville Dam is unprecedented and is assisted by man-made devices.

Some members of the group expressed concern that the use of the word "significant" would be too open to interpretation. Thus, word smithing continued. All members agreed that the Day 1 presentations and Day 2 discussions to this point support the following statement:

> The pinniped-fishery interaction at Bonneville is a new impact on endangered salmon (it wasn't there 10 years ago) at or above a 4% mortality rate and, as such, needs to be effectively managed. Pinniped predation either impedes/constrains or negatively limits salmon recovery.

However, at least one task force member expressed a desire to make certain that sea lions are not going to be 'taken' to make up for the lack of ability to manage other man-made impacts to salmon (such as Alaskan trawl fishing or an inability to make adequate habitat improvements)—and also make certain that if sea lions <u>are</u> killed, the region will be able to adequately measure the impacts so that we know it actually mattered to the recovery effort. Without additional information, the group was not yet at a place to reach consensus about whether or not the sea lions are having a 'significant negative impact'.

Criteria Discussion

As noted above, throughout the day, the group was asked to consider "what criteria does the Task Force recommend to assist NMFS in the interpretation of 'significant negative impact' and the extent to which pinnipeds are causing undue injury or impact to, or imbalance with listed species?" A running list of ideas around these criteria was kept. Criteria which might be used in the interpretation of significant negative impact include:

- The pinniped population has doubled (or more) in _____years
- The percentage of mortality is comparable to other forms of in-river mortality that currently are being managed
- The trend of predation is worsening
- The problem is likely to persist over time
- The impact is unchecked
- The reduction of pinniped predation will significantly assist in salmon recovery

This topic will be returned to in the next session

<u>Actions/Next Steps for next time:</u>

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- OR/WA/NOAA & the COE will work on answering Task Force questions for further analysis and get these answers to the facilitation team for distribution at least two weeks prior to the next meeting.
- DS Consulting will get notes to task force members in (roughly) 7-10 working days. Task Force members will be asked to review and approve the notes prior to a final draft being sent out for public review.
- DS Consulting will get all of the power point presentations posted online by 9/14 (*note, these were posted 9/11)*
- DS Consulting will get the final consensus Protocols to the task force and posted to the web
- Jim Ruff (NWPCC) offered to provide information on the Smith-Root electric barrier proposal to the Council *(note: this was forwarded to the Task Force on 9/6/07).*
- Bob Willis and Guy Norman will provide an update about their Sept. 28th meeting with Smith-Root at the next meeting
- Task Force members will review the proposed draft report outline and provide input to the facilitation team about its adequacy prior to the next meeting.

Other Items
Throughout the day the task force was given other handouts:
Donna Silverberg – passed out a draft final report outline that might help as a focus for discussions. She asked that the group review the outline at their leisure and let her or her team know whether it is an adequate start for the Task Force's report.

Garth Griffin provided Task Force members with the following: a hard copy of the states' application; MMPA Section 120; a graph depicting fluctuating spring Chinook returns at Bonneville from the 1930s to present, and a copy of the 'pen station' suggestion submitted by a member of the public.

The meeting was adjourned at 4:30.

The second session of the task force is scheduled for October 9-10th. It will be held at the Double Tree Lloyd Center Executive Meeting Center, Portland, Oregon

These notes respectfully submitted by the facilitation team, Donna Silverberg, Erin Halton and Robin Gumpert. These notes were finalized and approved by task force member consensus on October 9, 2007.

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Proposed Agenda Day 3 – October 9
9:00 am – 5:00 pm

9:00 **Welcome and Introductions**–Donna Silverberg, Facilitator, DS Consulting

9:20 **Review Agenda for Day and Task Force Logistics**—Donna Silverberg
- Public Input will be invited in written format

9:30 **Follow-Up to Session One**

Finalize meeting notes from 9/4 & 5

The states, NOAA and COE will provide presentations addressing the questions asked at the first Task Force session
- 9:40 Marine Mammals – Robin Brown and Bryan Wright, ODFW
- 10:40 Fish Issues – Guy Norman, WDFW
  - Questions and Answers

12:00 **LUNCH BREAK** (lunch will be provided for Task Force members)

1:00 **Getting to Work: Making Progress on Task Force Charge**
Question Number One:

(1) What criteria does the Task Force recommend to assist NMFS in the interpretation of "significant negative impact" and the extent to which pinnipeds are causing undue injury or impact to, or imbalance with listed species?
- At the last session, the group began to develop criteria to assist in NMFS' interpretation. This period will be used to refine and finalize these criteria.

3:15 Break

3:30 **Question Number Two:**

(2) If available and practicable, what non-lethal measures does the Task Force recommend be taken prior to implementing lethal removal?
- What recommendations would the Task Force like to make regarding non-lethal measures?

4: 45 **Evaluate Session and Closing Comments**

5:00 **Adjourn**

Day 4-October 10
8:30 – 4:30

8:30 **Get Coffee, Get Settled**

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8:45 **Opening Comments**
Task Force members and advisors will be asked to share any thoughts from Day 1 discussions. The public will be invited to share their input through written comments.

9:00 **Continuing the Work: Making Progress on Task Force Charge**
NOTE: The Task Force will continue to work through the questions posed by NOAA for the remainder of the day. Timing of topics and breaks will be determined by the Task Force. The questions are as follows:

Question Number Three
(3) If lethal removal is included in the recommendations, what criteria did the Task Force use to individually identify the specific animals to be removed and which animals meet those criteria at the time the Task Force completed its deliberations?

- If the non-lethal measures are unsuccessful and lethal take is determined to be the course of action, how should specific animals be identified? Are there animals that might already meet the criteria?

Question Number Four
(4) If lethal removal is included in your recommendation, does the Task Force recommend a limit to the number of sea lions that may be removed and if so what is the justification for that limit?

12:00 **LUNCH BREAK** (lunch will be provided for Task Force members)

(5) If lethal removal is included in the recommendations, what limitations (if any) would the Task Force recommend on timing, location, take methods or duration of the authorization?

(6) For purposes of post implementation evaluation, what criteria does the Task Force recommend for evaluating whether the implementation of the Task Force recommendations have been successful in addressing the pinniped-fishery interaction?

(7) Regardless of the outcome of this process, what might be the most effective means to achieve a long-term resolution to the pinniped – fishery conflict?

4: 00 **Determine Next Steps in the Process**

4:30 **Adjourn**

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TASK FORCE MEETING AGENDAS and NOTES

NOAA FISHERIES
Pinniped-Fishery Interaction Task Force
Facilitator's Summary Notes

October 9 & 10, 2007
Double Tree Lloyd Center
Portland, Oregon

NOTE: The following notes are a summary of the second meeting of the Pinniped-Fishery Interaction Task Force. Questions or clarifications about these summary notes may be raised to the facilitation team.

Task Force Members Present for All or Part of the Meeting: Daryl Boness (Retired Marine Mammal Scientist), Bruce Buckmaster (Salmon for All), Jody Calica (CTWS), Robert DeLong (NOAA), Patty Dornbusch (NOAA), Doug Hatch (CRITFC), Thomas Loughlin (Marine Mammal Scientist), Barry McPherson (American Fisheries Society), Guy Norman (WDFW), Joe Oatman (Nez Perce Tribe), Dennis Richey (Oregon Anglers), Carl Scheeler (CTUIR), David Shepherdson (Oregon Zoo), Paul Ward (Yakama Nation), Steve Williams (ODFW), Bob Willis (USCOE), Sharon Young (Humane Society of the US).
Note: LCREP representatives Deb Mariott/Chris Hathaway were unable to attend due to scheduling conflicts.

Technical Resources and Advisors present for all or part of the meeting: Robin Brown (ODFW), Brian Gorman (NOAA), Garth Griffin (NOAA), Sandra Jonker (WDFW), Steve Jeffries (WDFW), Brent Norberg (NOAA), Scott Rumsey (NOAA), Robert Stansell (USCOE), Bryan Wright (ODFW).

Also present: Anita Bilbao (NOAA), Dave Colpo (PSMFC), Mandy Cook (PSU), Anne Creason (BPA), Mitch Fong (NOAA), Sharon Glaeser (PSU), Barry Espenson (Columbia Basin Bulletin), Michael Gosliner (Marine Mammal Commission), Sarah Kirkpatrick (PSU), Susan Reimer (ODFW), Jim Ruff (NPCC), Steve Sanders (Oregon Attorney General Office), Matt Tennis (PSMFC).

Facilitation Team: Donna Silverberg, Erin Halton and Robin Gumpert.

Day 3 – October 9

Welcome and Agenda Review–Donna Silverberg, Facilitator, welcomed everyone to the meeting and led a round of introductions. She reminded the group that the charge of the task force is to review and deliberate issues related to the application by the states of Idaho, Oregon and Washington under Section 120 of the Marine Mammal Protection Act as well as issues in NOAA's Task Force instructions. She noted that the meeting is for this deliberation to occur

amongst task force members and, as such, she invited members of the public to submit their comments or suggestions in written format either during the meeting or via email following the meeting. Any public comments would then be distributed to task force members either during day two or between meetings.

Follow-Up to Session One – The task force finalized the meeting minutes from the 9/4 & 5 meeting by a consensus poll. Task force members requested that any revisions to future drafts of the minutes be distributed in a legislative format, showing all edits/comments submitted.

Steve Jefferies, WDFW, gave an update on the Smith-Root meeting. He reported that Smith-Root had tested its electric field barrier on Harbor Seals in captivity at a low voltage, but not yet on sea lions. They clarified that the barrier does not work yet in salt water and that the voltage would have to be raised for use in deterring sea lions. Jeffries said there was still no conclusive information about how the barrier might affect fish, birds, or other life that came into contact with it, or how well the system would work in areas with strong currents and bubbles in the water; as currently designed the system will not work in areas of strong currents. Jeffries said their initial proposal was to put an electric grid in the Willamette, near the mouth of the Clackamas River, to test it on sea lions swimming upriver to the electric grid. He added that sonar would be used to differentiate between species--essentially to allow passage for fish and deter predatory animals. Jeffries said that they are working to find additional locations in the U.S. that might be used for further testing, noting that there are few sites or facilities available. Bob Wills, COE, said that the proposal for barrier testing is a line item under "innovative proposals" and has been approved, subject to determining its impact on other species, which was not addressed in Smith-Root proposal. He reported that, due to the uncertainties noted by Jefferies, scientists present at the meeting questioned whether it would work for the area below Bonneville anytime in the near future.

Comments/Questions from task force members:

- What would be the effect of motors, barges? A: Jim Ruff, NWPCC: while the council did approve funding the proposal through FY09, implementation issues and concerns remain; he deferred the question to BPA as they are the implementing body. BPA has identified considerable concerns regarding the proposal, including questions regarding the effect of motors/barges and most notably where to test the barrier and on what species. Smith Root is tasked with laying out their critical path, showing how they plan to step through the testing on various species.
- Even if the barrier can be calibrated and set to recognize sea lions, it sounds like it might still affect sturgeon. It also, seems like the effects of currents in the river could render it unusable. A: Guy Norman, WDFW: during the meeting the managers expressed desire to continue testing and work through the technical issues, to see if there is some possible outcome that satisfies the needs of all species.

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Presentations Addressing the Questions Asked at the First Task Force Session:

Pinniped Information. Bryan Wright, ODFW, addressed questions raised by task force members regarding pinniped data. He noted that in answering the questions, he came up with 4 different approaches to answering "what would be the effect of 500-1000 sea lions [present at the dam]", and acknowledged that each method has its own pro/cons and assumptions. Wright said that in 2007 the average residency period was 32 days and noted that although sea lions were previously observed visiting the Bonneville area and then retreating to Astoria, they are now being seen staying in the area for longer periods of time. Wright noted that only two of the eight branded animals observed at Willamette Falls also showed up at Bonneville Dam. He said that with the monitoring efforts of the past 6 years, 271 is the total number of animals that can be identified, and 71 of those have been branded. Tables 3.2 and 3.3 in Wright's Answers document shows data on the minimum number of animals present at the dam each year, the amount of days that branded animals were present at Bonneville and their observed amount of salmon consumed.

As to identification, Wright noted that COE staff can identify animals based on brands and their natural markings. He acknowledged the efforts of Robert Stansell, COE, in providing the pinniped data and also the Portland State University researchers who helped work through the very rich data sets available. He also provided the task force with a large satellite map of the Bonneville Dam study area, featuring the location of navigation marker 85, the location of the trap at Bonneville, and the haul out sites. Wright also noted that there have been sightings of animals in some of the small creek tributaries near Bonneville Dam. Wright's full document is available online at: www.mediate.com/dsconsulting/pg17.cfm.

Comments/Questions from task force members:

- Can you speak to the magnitude of the marking effort? A: we use two traps at Astoria and try to mark them at the highest level we can, given their behavior and the man-power available.
- Any use of dye or bleach for marking the animals? A: Steve Jeffries, WDFW: we used those tools for the marking effort at Ballard and they did not work well, due to molting. Those tools may work better on female California sea lions.
- Is there trapping anywhere between Astoria and Bonneville? A: no - there are no predictable haul out sites in that range.
- For those 71 branded animals, it seems there is an enormous amount of time and energy spent in the branding process, to what effect? A: For this effort/issue, it does help us get a handle on the information requested by the task force and others. It also is the most unambiguous method for identifying animals. It takes a crew of 4-6 people to handle each animal. There is a cost involved, and we currently have enough funding to keep the efforts at the same level of capture. If there is a desire to increase efforts, we will need more funding and manpower.
- If we're trying to identify the "big offenders" or those whose removal would make the biggest difference, do we have any sense of what contributions they are making?

Might the non-branded animals be eating just as much as the branded ones? A: Robert Stansell, COE: it is safe to assume that they are eating just as much as any branded animal, and although they may be more elusive than branded animals, those with natural markings help us track patterns of behavior and where they're hunting.

- While recognizing that some marked animals may travel to other locations, can you discuss the constraints for marking at Bonneville and projections for success for the coming year, and more years ahead? A: Steve Jeffries, WDFW: we have had some preliminary discussions with Stansell and we believe we can catch more animals by eliminating haul-out space used, evaluating locations of traps (there is a suggestion to place one below the Bonneville spillway prior to the start of spill) and adding additional trap sites. It was noted that the cost is $15-20,000 for each trap. All of these non-lethal measures are part of what we're proposing in order to protect fish passage. Mostly, we need more manpower. Another possibility is adding a branding site at Bonneville which would include a barge and a squeeze cage - $110,000 is the estimate on equipment costs and effort for that undertaking. A benefit of moving the animals to Astoria for marking is the additional 150 miles they have to cover to return to Bonneville Dam.
- Can you say more about the benefits of increasing efforts to catch/brand the animals? A: Stansell: if we can catch them, then we can brand them for identification that might allow future lethal take action; however, it all depends on the management actions and definition of individually identifiable determined by the task force.
- Comment: it seems that the relation between the number of animals, the size of the animals, and the location where they spend their time/hunt – those might be the kinds of ways to analyze the data that defines animals as a "major taker." Whether they are branded or scarred, it gets at the fact that they are making a significant negative impact. We can see from the tables that there are many animals at the dam for a short time, and they would not fit into the above criteria.
- As we try to understand the relation between marked/unmarked animals and what would define an animal as one making a significant negative impact, is there a way to define a sub-set of the population? A: Stansell: yes, but that depends on the criteria you set up. Some animals are observed at the dam for days but are not observed eating fish (yet, we are relatively certain they are eating fish, they're just unobserved), and then there are others whose presence is not observed who likely are eating fish.
- Comment: even if an animal is branded and is only observed eating one fish, it is highly probable that it is eating more than that. What does vary is <u>where</u> the hunting activity takes place.
- Is it safe to assume that all animals are predating at the same rate if they are in the same area? A: Daryl Boness: it is quite well known that there is variability in prey preference, and there have been differences in diet preference and hunting abilities observed. Steve Jeffries added that 95% of the diet of those animals at Bonneville consists of salmon. Bryan Wright added that there are 2 years of scat sample data available that support the 95% number.
- Regarding the estimate of 3,000-4,000 of salmonids eaten each year, is there a way to extrapolate how animal removal might affect the total of fish taken? A: yes, although it would be a minimal estimate number.

- If those animals that are deemed "primarily responsible" are removed, would another animal move in to become a more dominant predator? Does the problem extend to the predation area and to naïve animals? A: Daryl Boness: yes, if you remove a dominant animal from a hot spot, another will fill in. The problem is, if there are 100 possible animals that could be "fill-ins", we can't predict which one will assume the dominant spot. So one of the real issues might be finding a way to make that prediction. Robert DeLong, NOAA, noted that when a dominant animal vacated a feeding territory at Ballard Locks, another animal immediately filled in, only to be replaced by the dominant animal within 1-10 days when it returned.

Additional Fish Data. Doug Hatch, CRITFC, referred the group to his "answer documents" regarding the stock composition questions generated by task force members at the first meeting. He said that of the data compiled for years 2003-07 at Bonneville Dam, showed that 30-45% of the salmon stock composition was made up of listed stocks based on microsatellite DNA analysis. In addition, useable DNA was extracted from fish bones collected in sea lion scat samples in 2006. Though limited in scope these data corroborated with the stock composition estimates indicating that sea lions were consuming salmon stocks non-preferentially. Regarding fish scarring resulting from interactions with pinnipeds, estimates showed an increase from 12% - 38% from 1999-2005. He noted that some scars were recent and others were older and partly healed. He also provided the group with a spreadsheet on spring harvest rates (through May 31) for the years 1997-2007. Hatch's full documents are available online at www.mediate.com/dsconsulting/pg17.cfm.

Guy Norman, WDFW, referred the group to several documents regarding the status and trends of the salmon stock data, including the executive summary of the most recent regional Federal Columbia River Power System Biological Assessment. Norman said a "no-stone left unturned" approach was brought to this biological assessment. He highlighted annual return data and interim recovery targets, and said that improvements are expected for all the stocks, depending on the coming years' actual conditions. Norman said that there are too many factors to conclude whether predation is affecting one species more than another. He said that spikes in the 2001-03 runs reflected a good rebound in salmon populations, with good water years, hydro passage and good ocean survival conditions. He referred the group to information about the hydro system, habitat, hatchery and harvest strategies, noting the inclusion of offsite mitigation, investments in monitoring programs, and investments in alternative techniques to protect/support fish. Norman said that NOAA's Biological Opinion on the Action Agencies' Proposed Action is scheduled for release on October 31 and will be available for public and federal court review. He clarified that the level of tribal harvest is embedded in the 10-15% referenced in the executive summary, with a minimum of 10,000 for the 4 Columbia River Tribes; however, in low abundance years, there are not enough fish to meet minimum tribal harvest even with combined hatchery and wild fish. Documents referenced by Norman are available online at: www.mediate.com/dsconsulting/pg17.cfm

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Comments/Questions from task force members:

- What is the pike minnow predation management program? A: it has been in place for 15 years and is a bounty reward program through which sport fishermen are paid for their assistance in removing pike minnow.
- Are latent mortality statistics a result of wild-run fish that are caught and released who don't survive? A: we see latent mortality as an impact to all populations.
- I notice that harvest levels in 2001 were elevated – in terms of modeling, how is the harvest level determined? A: the answer lies in the *U.S. v. Oregon* Harvest Table Schedule which was assembled by regional representatives. He noted that future year run size is predicted based on returns of jack salmon. The initial quota is based on that prediction. There also is in-season management that includes factors such as the aggregate run to date and thresholds for each population in each ESU to define which levels are harmful to exceed. He noted that the entire table schedule document is available online.
- Is ocean capture not of great concern for these stocks? A: although there have been some limited tag recoveries of Snake River spring Chinook, we are fairly certain that ocean catch is mostly comprised of Alaskan stocks, and coastal harvest is estimated to be an impact of 1% or less. The questioner disputed this estimate and cited bycatch of spring Chinook in the coastal whiting fishery that is in addition to substantial bycatch in Alaskan trawl fisheries which were determined to be fish from the Columbia River. Guy acknowledged that the impact assessment documents provided to the task force (Biological Assessment of Effects of Federal Columbia River Power System and Mainstem Effects of Other Tributary Actions on Anadromous Salmonid Species) do not address the impact of ocean intercept fisheries.
- Comment: in doing a "quick and dirty" comparison using data presented at the 9/4&5 meeting of the amount estimated taken by pinnipeds to the amount allowed for tribal ceremonial take, it appears that the increased pinniped predation rate is approaching the level of allowable tribal take. Recently, for the ceremonial subsistence take, the break down is just under 1,100 fish per tribe for spring Chinook. For the same run year, there is an estimated 4.2% sea lion predation rate. The gap between what pinnipeds catch and what tribes are allowed to take is narrowing.
- Comment: if you compare apples-to-apples, the impact of commercial fishing is much less than the impact of pinniped predation.
- What can you say about estimated latent mortality rates? A: we can say that of those fish released, an estimated 10% in sport fishing will die; an estimated 18% of in commercial fishing fish that are released will die these are limited to 2%. The 4% estimated take by pinnipeds does not include delayed mortality.
- Comment: we have to keep in mind the 4% pinniped predation figure that's been discussed here – it is a result of actual observations at the dam and is certainly underestimated.
- Comment: for years 1997-1999, there was a very limited number of fish in the river. Regarding the proportion of allowable take for each year it is 2% or less, with some exceptions for years 2001-07, when there was 1 year with a 2.2% allowable take.

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Review of Question Number One: What criteria does the Task Force recommend to assist NMFS in the interpretation of "significant negative impact" and the extent to which pinnipeds are causing undue injury or impact to, or imbalance with listed species? Silverberg reminded the group that at the first meeting, the group began to develop a set of criteria to assist in NMFS in their interpretation. She referred the group to the notes from the first meeting and displayed the initial list of possible criteria points from that discussion. The group discussed whether to further refine the rough "criteria" statements put forth at the September meeting. As was the case at the September meeting, some felt the word "significant" is too open to interpretation and needs a numeric criteria attached to it – both for defining and measuring progress. The group then had a discussion on how to best refine and finalize these criteria; a summary of that deliberation is below:

- Suggest showing that predation is above a particular percentage of the run population - and/or define a "trigger point of concern."
- Also suggest looking at the degree to which pinniped predation is affecting (or delaying) recovery in relation to other impacts.
- Because many factors are contributing to or are hindering salmon recovery, the impact of predation needs to be defined exactly, as we currently have combinations of sampling and expanded estimates.
- I would agree to using numeric values, and regarding the five miles downriver from Bonneville Dam (the location of the mile marker suggested in the states' application), I would have to say that any number over zero IS significant, given what the predation levels are down river and out toward the mouth of the Columbia River.
- We have been focusing on salmon traveling upriver; do we also need to consider the juveniles going downriver at the time sea lion presence is at its highest levels? Comment: Robert Stansell, COE: yes, we have observed predation on juveniles, and we have scat samples showing that of 71 animals tested, 5% had juvenile remains in them.
- The percentage of mortality estimates used here are extremely conservative. Note also that the loss that can be attributed to the hydro system would dwarf those attributed to pinnipeds.
- Other limiting factors were measured against a base, pre-European impact level. So, in terms of comprehensive analysis, if we can say that pinniped predation is at a 4% level, and use the improvement expectation analysis used for the 4 "H"s, it may help us draw the line above which predation is not allowed to increase.
    - Yes, the impact of pinniped predation is being evaluated and assessed consistent with and in the context of the other contributing factors that are impacting salmon population recovery.
- Suggest that we may want to consider going back to the basics and set criteria based on timing of presence, diet, etc.
- On page 13-14 of the states' application, we see an estimate of 13,000 fish have been taken by pinnipeds; that is a much higher overall impact rate than 4%! We have to ask the question, "if we lethally remove sea lions, how much will impact predation down the road?" We need pinniped predation to be shown as a relative impact and we need the best estimate of the pinniped predation, to plug these into recovery trajectories.

  - I don't think we could get all that information or come to consensus on that. Section 120 asks us to consider 4 things, including: past effort to non-lethally deter, and the degree to which pinnipeds are impacting populations of salmon.
- I would have trouble without looking at bio-energetics, as study information is not available for the downstream areas, we are stuck with dealing with this issue in a less quantitative way than we would like, and we still have to come up with an answer on whether California sea lions are having a significant negative impact on the recovery of endangered salmonid populations between Bonneville Dam and navigation marker 85.

A round of group revisions was conducted, considering the interests that had been discussed, leading to a possible statement and initial criteria to answer NOAA's question:

> "Based on information presented in the states' application and presented to the Task Force, a majority of the Task Force finds that Cal. sea lions are having a significant negative impact on the recovery of Columbia Basin threatened and endangered salmon."
>
> The majority of the task force inferred this from discussion of the following:
>
> Criteria which NMFS might use in the interpretation of significant negative impact include:
>
> - The pinniped population has doubled (or more) in 12.9 years
> - The percentage of mortality is comparable to other forms of in-river mortality that currently are being managed
> - The trend of predation is worsening
> - The problem is likely to persist over time
> - The impact is unchecked
> - The reduction of pinniped predation will significantly assist in salmon recovery"

Donna asked the task force members for a show of their individual level of consensus on this. 17 of the 18 task force members signaled their support. One task force member, Sharon Young, HSUS, signaled a "block" to consensus and said it is because she doesn't consider the impact of pinniped predation to be 'significant' for a variety of reasons. She did not see it impacting decline or recovery as much as other extractive sources that require mitigation; she did not see in the data provided to the task force that there is a consistent downward trajectory in the stability of the salmon recovery that is correlated with predation or that differs from fall runs that have no predation and without using numeric values as criteria for making this assessment it is difficult for her to assert that pinnipeds are having a significant negative impact. This prompted further conversation amongst the task force members:

- If you consider the 4.9% of juvenile recovery increase, which is almost equal to the minimum estimated pinniped predation rate, and the $160 million that is spent on

juvenile recovery--this certainly IS significant - how can anyone say that it is not significant?

- We have both financial and quantitative information, what more is needed? Would you need to see that pinniped predation is a greater impact than harvest?

The group spent more time trying to refine its statement and criteria. Donna asked for a second show of level of support – the majority of the group continued to support the above statement, while Young did not. Young said she would have liked to have seen more precise information given to the task force with regard to impacts of the various extractive sources information and that she didn't see evidence that factors impacting salmon are being dealt with in proportion to their relative contribution. She said that she felt the impact of pinniped predation IS being addressed, just not to the degree that other task force members would like. She added that she doesn't see how taking these sea lions will appreciably affect recovery because of the number left behind in the river and even taking out *every* sea lion in the river would not significantly change the recovery of the salmon population given the impacts of other factors on the population. She also clarified that she would not have worked on the drafting of MMPA Section 120 in the 1990's if she thought there couldn't be a case made for lethal take of marine mammals in certain situations, but, given the data that exists with regard to the Bonneville, she doesn't think this situation qualifies. This prompted further conversation amongst the task force members:

- Comment: We in the region feel we have exhausted all other non-lethal alternatives - not only has the hazing not been effective, but the rate of predation has increased. While recognizing the point of valuing all forms of life, to ignore the contribution that the salmon would make if they did survive and to forget that this is something that we could have more of an effect on – seems a disservice. Remember that the tribes place salmon on the same level of importance as water.

The facilitator asked Young whether her lack of support of the definition provided for the significant negative impact was a complete block of the process or might this be a place that would require a minority opinion in the report. It was agreed that Young's objection would be noted in the final report, she will provide a minority opinion that clarifies this and the group could move on. Additionally, there will be language in the report which indicates that, based on the information presented to the task force, the majority of the task force finds pinniped predation to be a significant negative impact on endangered salmon. Donna suggested that the draft statement and list of criteria bullets developed during the meeting be circulated so that task force members could review and refine them overnight in preparation for day 2 of the meeting—allowing the group to move on to other questions asked by NMFS.

ACTION – Sharon Young, HSUS will draft a "minority opinion." to clarify her position on this issue.

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ACTION: Task Force members will review and submit suggested edits for the 'significant negative impact criteria' information requested in Question 1.

Question Number Two: If available and practicable, what non-lethal measures does the Task Force recommend be taken prior to implementing lethal removal? What recommendations would the Task Force like to make regarding non-lethal measures?

The states began by reminding the group of the proposed plan of action within their application. Guy Norman, WDFW, said that they had proposed an incremental process: if they do not have success with moving the animals, they would use lethal measures (if approved). This would be followed by an evaluation period, including a study of the effects of lethal take on other animals. He emphasized that the goal would be to learn and assess the effectiveness of lethal measures before continuing. Norman noted that using non-lethal tools concurrent with or after using lethal tools is a measure that has not tried and therefore has not been evaluated.

Questions/Comments from task force members:

- How would you describe the effectiveness of blunt-tipped arrows and other non-lethal ammunition? A: Jeffries: this only startles them and our range is so limited. The animals are able to learn quickly that they can easily avoid being within the range of harassment. There were animals at Ballard that responded to seal bombs and cracker shells, but there are too many other animals at Bonneville that would potentially be adversely affected by the use of those non-lethal tools.
- Is it possible to implement lethal and non-lethal tools at the same time? A: Jeffries: it is an approach that has been used on polar bears and may work as an "education in escalation." A commitment would be made to use a combo of lethal and non-lethal tools that would include evaluation of the overall efforts.
    - Comment: I would hope that the recommendation would be to have a monitoring process in place that would help in the development of an improved, effective way to deal with this issue.
- What worked best on stellar sea lions? A: Jeffries: almost all non-lethal methods – boat hazing, cracker shells, seal bombs, rubber buckshot, and other projectiles that are shotgun fired.
- Bob Willis, COE, said that the COE plans to continue its monitoring and hazing program from the dam through 2008.
- Exposing pinnipeds to Orca sounds, in conjunction with lethal measures - might that work in this case? A: Jeffries: it is possible.
- In response to a question about whether it might deter predation if sea lions saw others being killed around them, Robert DeLong said he was not sure sea lions acknowledge death as something that is going to happen to them, nor has he seen any evidence of recognition that another animal has died or been killed – even if right next to them. Although there is a sociality among to these animals that is very strong and the associations may last for many years, it would still be surprising to see recognition of the death of a cohort. He would say the auditory cue *in conjunction with* lethal measures may be more effective.

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- With Steller sea lions, I can remember firing one shot and seeing the beach clear; the difference is the California sea lions are already in the water where they are most comfortable. This makes it more difficult to be effective with non-lethal measures that they can easily avoid.
- Are there efforts with taste aversion or any other technologies that we should know about? A: Jeffries: taste aversion was used at Ballard – with Lithium Chloride contained in a gelatin capsule surgically implanted into the abdominal cavity of anesthetized live steelhead. The live fish were presented to the sea lions on a tether. Several sea lions were treated but we were not successful in conditioning a lasting taste aversion to steelhead in the treated animals. Jeffries added that throughout hazing efforts, all ways/means have been explored and that hazing efforts could not have been performed any more efficiently than they have been already.
- Would more or less haul out space make any difference? A: the conclusion from the COE was that if we want to identify more animals then we need the space to trap them.
- Regarding acoustic devices, they have been observed to be effective on naïve animals. Is there a way to boost the acoustic deterrent method? A: Brent Norberg, NOAA, said that the acoustic devices currently used function at the physical limit of a volume that can be maintained and be put in the water before it breaks up in the water and becomes ineffective. The Navy does have advanced, expensive technology that can broadcast at higher volumes but it has the potential to adversely affect fish and other marine life.
- Task force members expressed the desire to see all the non-lethal methods specified in Section 109 continue.
- The Army developed a ray-gun that makes people feel like they are on fire. Could that be adapted for use at the Bonneville Tailrace? A: not likely, as it could pose serious risks to human safety.
- What is the "trade value" of sea lions in the zoo community? A: David Shepherdson, Oregon Zoo: not much, as there is great cost associated with housing and feeding the animals.
- What about wiring a salmon, so the animal got a good hard shock when it bit into the fish? A: a problem with that suggestion is in attaching and keeping the wiring in place on the fish and in successfully catching the fish in the first place.
- What about area association aversion? A: it hasn't been found to work.
- We hear that you've been harassing animals when the food source is already in front of them - would it make more sense to use hazing methods on them before the food got there? A: Jeffries: we did explore that, and I can safely say that crews did not turn down any area where they could safely haze. We did attempt to haze non-habituated animals.

Day 3 Closing Comments

Donna summarized by saying that she had heard some new ideas generated and that the COE plans to continue their hazing efforts, proven to be effective on the naïve animals,

presuming funding remains available. Many feel that all available non-lethal measures have been exhausted and, because of this, there is a suggestion to use a combination of non-lethal and lethal measures. Task force members asked that reports be given on new technologies as they are developed, and for the states to be responsible for using them when they become available. It was noted that for those who must implement actions resulting from this process, a step-wise approach will make it clear that they're doing all they can to give animals the chance to change their behavior and avoid the need to have them lethally removed.

The facilitator thanked everyone for their participation and the meeting was adjourned.

Day 4-October 10

Welcome/Opening Comments: Facilitator Donna Silverberg, DS Consulting, welcomed everyone to the second day of the meeting. Task Force members and advisors were asked to share any thoughts from Day 1 discussions. Members of the public were invited to share their input through written comments.

Task Force members commented that addressing the predation issue at Bonneville continues to be a challenge and some noted that after reviewing the list of criteria bullets generated as part of answering Question One, it was clear that revisions need to be made to make them sound more like criteria and less like conclusions. One task force member reminded the group of the importance of including language that acknowledges how the dams have contributed to emerging and expanding the issue of pinniped predation on salmonids in the Columbia River.

Question Two: If available and practicable, what non-lethal measures does the Task Force recommend be taken prior to implementing lethal removal?

Donna referred the group to a draft set of statements that summarized the task force discussion from the previous day. She noted that the draft included a suggested course of action for the regional entities (*note: the final version of this is below*).

Task Force Comments/Edits/Suggestions:

- We need to recognize that the non-lethal measures have not been tried in combination with lethal measures.
- It needs to be clear that agencies will continue to pursue new and emerging technologies – and note that it is an action for the future, not to take precedence over using lethal measures.
- There are the practical limitations that arise when you move to hazing downriver; we need to be aware of the accessibility issues of the river downstream while we keep it in mind as something worth trying.
- Who decides what is ultimately "available or practical"? A: Garth Griffin, NOAA: both the task force and NOAA get to weigh-in on that.

- If a "lethal take" zone were to be established, and hazing efforts continued just downstream of that area, could one assume that the ones who get through are habituated animals?
    - Considering the great food resource available in front of the dam, is there a better chance of successful hazing on animals that have not yet discovered what that resource is?
    - Suggest saying: focus harassment on the downstream areas where we can affect naïve animals prior to their recruitment into a habituated group; lethal action would be focused on the area closer to the dam, where there is a higher probability of affecting the habituated animals.
    - Task force members suggested they should not put a limit on where the experts feel they can be most effective; they should only provide recommendations, and leave it to the experts to say where to haze.
- Regarding the ability to identify an animal as habituated vs. naïve: we should include a piece that says NOAA/NMFS has the responsibility and the resources to develop that technology.
    - A few task members stated that there isn't such a thing as a naive animal in the river, as they have traveled a long distance from salt water and are doing so because of the increased ability to forage as they draw nearer to the dam; however, it is clear that there are animals less adept at foraging in this area.
- How active are the animals at night? Is it possible to have round the clock hazing, to maximize effectiveness? A: Steve Jeffries, WDFW: we can't haze 24 hours a day, as even in the daylight hours, there are safety concerns and nighttime is just too dark.
- Suggest saying that the task force recommends adaptive management of non-lethal hazing efforts, to imply that those efforts that are shown to be most effective will be the ones that continue.
- As we look at whether hazing efforts will or can continue at the same level as in 2007, funding will continue to be an issue. We need to be financially realistic and recognize that the combined NOAA and COE expenditure was around $400,000 for FY07.
- We also need to recognize that the salmon are a dwindling resource and that federal agencies can "pull the plug" at any time, preventing take of salmon by anyone anywhere in the Columbia River.
- We do need to continue to guard the areas where we can prevent animals from moving into the Bonneville Dam area. No member of the task force thinks the non-lethal hazing should stop.
- We would like to indicate that NOAA, the COE and other regional entities with funding sources will continue to actively pursue funding..

Based on this discussion, the group approved the following statements regarding Question 2:

By consensus, the task force suggests the following course of action:

a. Continue to adaptively manage non-lethal hazing efforts

i. Where practicable, consideration should be given to harassment efforts in downstream areas where there is a higher probability of effecting less experienced animals prior to their recruitment into the habituated group;
ii. Monitor the non-lethal actions to evaluate and maximize effectiveness to direct future efforts.

b. For the future, NOAA and other regional entities should pursue emerging technologies for non-lethal harassment of seal lions, such as the Smith-Root option; and
c. NOAA and other regional entities should also pursue funding to support these efforts.

Question Number Three: If lethal removal is included in the recommendations, what criteria did the Task Force use to individually identify the specific animals to be removed and which animals meet those criteria at the time the Task Force completed its deliberations? If the non-lethal measures are unsuccessful and lethal take is determined to be the course of action, how should specific animals be identified? Are there animals that might already meet the criteria?

The task force was separated into small groups for discussion about how to approach question three. Guy Norman, WDFW, noted the need for any smaller group recommendations to be practical, doable and to address the ability to identify animals either by number or location.

Group reporting out on Question Three:
Group 1: concluded that the current application is not restrictive enough and needs to be more specific with regards to individual animals. They noted there are essentially two population pools: those with brands or scars that we know something about and the unmarked/unidentifiable ones. The group determined that the area immediately in front of the dam is where the highest concentration of salmon is and should be considered as an area of significance:

- If a marked animal is present that has been observed there in at least one other year, they would be eligible for lethal take.
- If a non-identifiable animal is seen taking a fish, we can conclude that it is a forager, and it is therefore eligible for lethal take, due to the significance of the site just in front of the dam.
- For an unidentified animal that is observed on one day but not observed taking fish, this group determined that these animals may be tangential and it would need to be determined whether the animal is returning prior to any lethal action.

The group also discussed the need to increase the number of marked animals for identification purposes, including spraying them with paint, bleach or dye. Regarding the estimated rate of salmon take, if the current estimate is a minimum of 4%, the goal is to get to a level less than that. They recommended that the day-to-day decision making

should take into account both near and long term goals, while also providing an evaluative standard. They acknowledged the need to have the best possible estimate of the impact of pinnipeds on salmonids, which is currently limited to a very distinct area. To that end, they recommended stretching the study areas out to areas further down river to generate a better idea if the level of take there is comparable to the area in front of the dam. This information would support objective adjustments of future measures.

Group 2: Began by clarifying that the objective is to short circuit the animal's behavior. They recognized that there are individuals in areas in front of dam that are, by definition, habituated and problem animals and therefore need to be removed to meet management objectives. This group recommends that 'identifiable animals' that are observed elsewhere, outside the five miles in front of Bonneville Dam, are also eligible for lethal take. They recommend a phased approach including removal of branded animals in a step-wise fashion, with initial focus on those marked animals found at the dam. They agreed with Group One that enhanced marking and continued monitoring is a key part of this effort and that not all the info they'd like to see is currently available. They further noted the desire to minimize the overall effects on other sea lions.

Group 3: This group followed closely with the recommendations of groups one and two, adding that there should be a phased, liberal approach that would first take problem animals with the intent of minimizing the recruitment of naïve animals. They suggested criteria for classification might include: duration of residency (minimum of one week); ability to clearly identify the animal (including the suggestions on short term marking); and/or the level of the individual animal's documented predation. They also recommended that existing documented problem animals be eligible to be lethally taken anywhere they are found. For the animals found within the BRZ (boat restricted zone), lethal take should be done in an incremental way that allows for response and documentation of that response.

A task force member raised the question of whether, given the numbers and actions suggested, this is an appropriate Section 120 issue. The task force discussed whether Sections 103 or 109 might be more appropriate for long term management of the populations since Section 120 was intended to be used on a select number of individually identifiable problem animals whose predation was having a significant negative impact on decline or recovery such that removing them would appreciable affect recovery of the fish. It was noted that this had been considered, but that the for the short term Section 120 seemed more appropriate as a tool for actions that could be monitored and evaluated prior to a full scale management plan under 103 or 109. Others said they found it to be unique within the states' application that the area in front of Bonneville Dam is a significant impact area.

The facilitator noted that there were some themes emerging from the small groups about how to identify the animals to be lethally removed: 1) any animal found in the BRZ area, 2) those animals that are seen in the area for certain period of time, and 3) those animals previously identified, with a long history of predation, even if they are found elsewhere.

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Some task force members felt strongly that they want to see the allowed number of sea lions within the BRZ be zero. This would be the easiest method for quantifying results. Others noted that choosing an objective is extremely critical when it comes to section 120.

Questions Four, Five and Six: (4) If lethal removal is included in your recommendation, does the Task Force recommend a limit to the number of sea lions that may be removed and if so what is the justification for that limit? (5) If lethal removal is included in the recommendations, what limitations (if any) would the Task Force recommend on timing, location, take methods or duration of the authorization? (6) For purposes of post implementation evaluation, what criteria does the Task Force recommend for evaluating whether the implementation of the Task Force recommendations have been successful in addressing the pinniped-fishery interaction?

The facilitator asked Task Force members to divide themselves into small groups to more fully develop possible approaches for managing pinniped predation, specifically the lethal take option. The group divided up based on their preference, if lethal removal were to be authorized, for how to select which animals should be lethally removed so they could then discuss and develop responses to questions 4, 5 and 6. It should be noted that a fourth approach, no lethal take, was preferred by one member but not pursued during this discussion.

The group divided based on the following delineations:

Blue: Animals that are marked, with a history of eating salmon in the 'significant area'

Green: Any animal above marker 85 (zero sea lions in the BRZ)

Purple: A phased approach that begins with liberal lethal take in the first year (or two), then operates with specific criteria in future years

Small group reporting out:

Blue Group-chart notes:

Goal: Reduce CSL predation on salmon in the observation area used to date below Bonneville dam to a rolling 3-year average of 1% or less.

- Lethal take can continue ONLY if the rolling 3 year average exceeds 1%. This decision should be made on an annual basis after the first three years.
- "Protected area" description: The boat restricted zone plus a zone with a 100 yard radius off the mouth of Tanner Creek.

Kill only:

A. Identifiable CSLs (marked, tagged branded, or with identifiable natural marks) that have been observed to have caught a salmon in the 'protected area below Bonneville; or
B. CSLs occupying a fish ladder or the area within 50 feet of a fishladder; or
C. Unidentifiable CSLs seen eating a salmon in the protected area can be killed on the spot while eating or attempting to eat; or

D. CSL with mark and history of salmon consumption in at least the past two years (may be taken in any location where it can Be safely done on the Pacific Coast except on breeding grounds)

Groups A & B can only be killed in the Columbia River above navigation marker 85.
Number of CSLs allowed to be taken a year: up to 1% of PBR; Managers may decide to take less based on in-year assessment and will strategize to minimize take.
Threshold for Task Force to consider if 'failure' under section 120: If the goal is not met after six years unless evaluation shows the goal is likely to be reached in the near future.

Other issues:

- Method of take: in field: shot gun, in trap: lethal injection
- Recovery of carcass {no more was written on the sheet]
- Lethal take must be done in a manner likely to maximize the effectiveness of hazing.
- Marking of CSLs will be emphasized to increase effectiveness.
- The Task Force should meet and evaluate after the first year of implementation.

Questions/comments:

- What are the effects or limitations of the shotgun method for take? A: Steve Jeffries, WDFW: at Ballard we relied on the techniques described by the American Veterinary Association (e.g. a weapon of sufficient caliber that can humanely kill.)
- Suggest that more emphasis be placed on the actual number of fish taken rather than estimated escapement rates.
- There seems to be an emphasis on failure instead of a focus on success. Is there a reason for this? A: We included the long-term timeframe as we believe 3-6 years may pass before we see predation levels reduced down to 1%. And to clarify, the 1% includes total mortalities.
- Comment: some sea lions are present from year-to-year, but are never observed taking fish. It is important to remember that for most of the fish observed taken, they aren't necessarily assigned to a particular animal.

Green Group — chart notes:

Zero tolerance in the BRZ

Q 4) Lethal removal of up to 2% of the PBR to achieve 0 sea lions above navigation marker 85 will have no impact on the reproductive efficiency of the population.

Q 5) Above 85, except for highly identifiable individuals (e.g. branded with a history of predation). The methodology should be at the discretion of the states and consistent with humane methods. Duration: 5 years.

Q 6) 0 to low abundance of Cal. Sea Lions at Bonneville Dam and predation <0.5% of the spring Chinook run over the dam.

Robert De Long, NOAA, said that their method sought to address the recruitment of animals to the predation group, thereby minimizing learned behavior as much as possible. The group also sought to make their option as simple as possible for the states to have

maximum management discretion. He noted that the group recommended lethal take on pinnipeds be capped at 2% of the PBR while working toward a zero abundance of animals in front of the dam. He clarified that the actions recommended by the group would be supported by and consistent with the non-lethal harassment program. He said that the group supported lethal take of any identifiable animal wherever they are found, and deferred take removal methods to the states. The group recommended a duration of five years, with success determined by a 0-.5% predation on the salmon run in any given year. Robert noted that the group tried to allow the states the maximum level of interpretation. Finally, the group noted that although 60-65% of actual fish kills are not attributed to any particular animal, they believe that any animal in the Bonneville area is catching fish, whether it is observed it or not.

Questions/comments:

- If all the animals above river marker 85 were taken next year, how many would you expect to fill in or return? A: our guess is that the animal count would gradually decline if we made the area an "animal exclusion zone". We feel this is better than a "piecemeal" approach.
- What if next year we see an increase in pinniped presence and we kill all the animals we can - where's the end point? A: we think that they've found this food resource and our hunch is that, as we reduce those who know of the food source, we would see the pinniped presence gradually drop. We do agree that the number is not likely get down to zero.

Purple Group – chart notes:

Take Strategy: Two-phase approach to target existing problem animals (see list 3.3) in the first two years to minimize new recruitment of problem animals.

Phase I--First 2 Years

1-All animals on table 3.3 may be taken within the BRZ (to Tanner Creek)
2-"Notorious" animals may be taken anywhere
3-New recruits to the "Suitable for Lethal take" list may be taken pursuant to #1 above.
4-New recruits to "notorious" may be taken pursuant to #2 above.

Phase II-Years 3+

Expand the take area for all animals on "Suitable for Lethal Take" list to marker 85 and "notorious" list to anywhere.

Note: Active pursuit of Suitable for Lethal Take listed animals may continue out of the BRZ or 85-dam zone.

Additions/recruits to the Suitable for Lethal Take list criteria:

- Identifiable individual
- Present/documented 7 days in 85-dam zone or documented take of 12 or more salmon.

Notorious is defined as:

- 30 salmon or 3+ years

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Take restriction: humane (e.g. shoot or chemical)

Measure of success: Reduction in the documented presence of sea lion and subsequent salmon take. Documented 5-year declining trend in salmon consumption coupled with decline in sea lion days.

Questions/comments:

- Regarding the list of identified animals provided by Robert Stansell, COE, - would you recommend lethal take of an identified animal that appeared in the first year? A: any animal on the list that appears again would be eligible for lethal take.
- Regarding a way to measure success, next year is predicted to be a big run year, and as it may get smaller over the next five years, would that bias the percentage? A: our intent was to tie both sea lion presence and the level of take together to reduce the chance of a percentage bias.
- Within your "phase 1", are new recruits eligible for lethal take under that criteria, and does that include those with natural markings? A: yes, and any animal on the identified list can be taken as well.

The facilitator asked the group for their overall thoughts after hearing all the groups report out:

- It appears there might be a close relationship between the proposal from the blue and purple groups; the green group seems more separate.
- The main difference between the methods is that one group specifies that it doesn't matter if an identified animal is observed eating or not; they will be trapped, removed and taken.
- There is potential for merging the blue and purple groups' proposals, with some tweaks on how to measure success.
- There is no upper limit of animals that can be taken under the purple group proposal

Action: The proposals generated by the small group sessions will be typed up by DS Consulting and sent out via email for Task Force Member review/editing between now and the October 30-31st meeting. The Blue and Purple groups will work to merge their proposals into one.

Revisiting the "Significant Negative Impact" Criteria: Donna referred the group to a version of the criteria document that was discussed during day one and included edits submitted by task force members in the morning. Two versions were shared and, after discussion and revisions, the group agreed they wanted more time to review and refine before supporting one or the other. Garth Griffin, NOAA, clarified that any help to NOAA with quantifying the criteria would be helpful. However, if the group is only able to offer qualitative criteria this would be acceptable:

VERSION 1

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Question 1: Significance

The Task force was unable to agree on quantitative criteria to assist NMFS in defining 'significant negative impact' due to the ambiguity of the phrase as used in the 'Act', and the type and limitations of data available. However, the majority of the task force inferred that California Seal Lions are having a 'significant negative impact' on the recovery of Columbia Basin threatened and endangered salmon based on the overall weight of evidence from discussion of the following:

1) As the overall CSL population increased so has the number of male sea lions observed in the Columbia River and specifically at and near Bonneville Dam.

2) The increase in occurrence of CSL in the Columbia R. system and specifically at the dam coincides with the spring migration of salmonids, many of which are ESA listed.

3) CSL scat sampling near the dam confirms that salmon are a major component of their diet

4) Observations of CSL at and near the dam document an increasing level of predation on salmonids—causing both actual mortalities and injuries that may result in mortalities.

5) Observations of highly identifiable CSL at and near the dam confirm that certain individuals consume large amounts of salmon.

6) These same individuals have been documented to occur at the dam and nearby waters in numerous years and often, while feeding at the dam, remain there for as long as a month.

7) The trends in both increasing predation and CSL abundance are likely to persist.

8) The impact will continue if it is not checked.

9) Lethal removal at the levels proposed in the states' application will not exceed (will be far below) PBR and will not deleteriously effect the CSL population.

10) A reduction in CSL predation will significantly improve the recovery of listed salmonids and work synergistically with other ongoing actions to conserve and enhance salmon recovery.

VERSION 2

Based on information presented in the states' application and presented to the Task Force, a majority of the Task Force finds that Cal. sea lions are having a significant negative impact on the recovery of Columbia Basin threatened and endangered salmon.

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The majority of the task force inferred this from discussion of the following:

Criteria which NMFS might use in the interpretation of significant negative impact include:

- Timing: are pinnipeds present at the same time that ESA listed salmon are migrating?
- Does the data at BON and existing science on CSL indicate that the trend of predation is increasing beyond baseline levels?
    - Are observed predation rates 4% or higher and anticipated to be higher throughout the river?
    - Have scars and injury rates, as measured at BON, increased annually since _____ resulting in some unknown delayed mortality?
    - Does CSL scat sampling near the dam confirm that salmon are the major component of their diet?
- Is the problem likely to persist over time if the impact remains unchecked?
    - Will reducing pinniped predation likely result in measurable improvements that contribute to salmon recovery?
- Is the percentage of ESA listed salmon mortality comparable to other forms of in-river mortality that currently are being managed?

Other considerations for taking action:

- Pinniped predation can be addressed and its impacts may be evaluated in context of other limiting factors (i.e. not on their own)
- There is no long term negative impact on pinniped populations
- There is a comprehensive salmon recovery framework that includes monitoring and evaluation in place
- Abundance: CSL are within the range of OSP and may be at carrying capacity.
- The problem is related to/resulting from human caused factors

VERSION 3:

1) Sea lion populations are within the area of BON
2) Observed predation rates are 4% and anticipated to be higher throughout the river
3) Scars and injury rates as measured at BON have increased annually since _____ resulting in some unknown delayed mortality
4) No action will likely result in expansion of the problem

Discussion/comments

- It is important to remember that something has really changed in last 5 years – the data that has been gathered on pinniped predation in the Columbia River is by far the richest data set to date. There may be limitations of this data, but would object to the use of word ‘scarce’ (note: this word was deleted from the above and replaced with ‘limitations’.
- The issues and questions raised by the lack of information about the role pinnipeds play in the broader salmon recovery effort is part of why the group did

not come to consensus about whether or not pinnipeds have a significant negative impact on endangered salmon recovery.
- The quality of the data is very good – and the conservative approach would be to err on the side of the salmon.
- While most of the task force was comfortable with the Version 1noted above, at least one member felt more work needed to be done prior to supporting the statements and criteria for use in the Task Force report.

ACTION: Task Force members will review the versions above and offer revisions that they could live with by 10/23.

ACTION: The Humane Society of the US will clarify its position about why they can not support a statement that stipulates that pinniped predation is having a significant negative impact on endangered salmon recovery and why they believe Section 120 is an inappropriate mechanism for the states' application.

Concluding Discussion

To address the significance issue, one member asked that the states offer a number that could quantify the effects that sea lion predation is having on salmon in the entire river. State representatives said they did not believe this was possible to quantify. Some members suggested that while this number could not be quantified, they believe it dwarfs all other limiting factors except hydro. Instead, state representatives referred back to the states' application and the figures they have come up with that are related to the area in front of the dam. The states limited their scope to this area because of the difficulty a whole river estimate poses. It was suggested one possible calculation would be to show what impact a doubling or tripling of known predation numbers might have on the salmon population.

In closing, the facilitator acknowledged the level of passion people have for this issue. It remains clear that some people are very frustrated by the situation at hand—as well as taking their task very seriously given the consequences any task force recommendations will have on both salmon and pinnipeds. She thanked all members of the task force for their participation and assistance with this process. She also noted that all members would need to do work between now and the final meeting so that the options presented in the final report are clear and representative of their views.

Handouts/additional documents provided to the task force during the meeting:

- A letter to Sharon Young from John Landahl, PhD regarding a non-lethal approach for consideration by the Task Force.
- A letter to Dave Clugston, COE, from Matt Keefer and Chris Perry, University of Idaho, regarding estimated pinniped predation at Bonneville on salmonid stocks.

Actions/Next Steps:

- Bob Willis will send DS Consulting the University of Idaho's adult fish study data on Columbia River stock specific migration for posting on the web.

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- The proposals generated during the small group sessions will be typed up by DS Consulting and sent out via email for Task Force Member review & editing between now and the October 30-31st meeting.
- Task Force members will review the Significant Negative Impact criteria statements noted above and offer revisions that they could live with by 10/23.
- All Task Force Members will consider question number 7 - "Regardless of the outcome of this process, what might be the most effective means to achieve a long-term resolution to the pinniped – fishery conflict?" – and will come to the meeting on October 30-31st with answers prepared.
- The Facilitation Team will provide a rough draft of the Task Force Report the week of the 22nd for discussion at the October 30 & 31 meeting.

Next Meeting: October 30 & 31, 2007 at the Double Tree Executive Meeting Center, Portland, Oregon from 9-5 pm.

These notes respectfully submitted by the facilitation team, Donna Silverberg, Erin Halton and Robin Gumpert. These notes were approved by task force member consensus.

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Proposed Agenda Day 5 – October 30
9:00 am – 5:00 pm

9:00 **Welcome and Introductions**–Donna Silverberg, Facilitator, DS Consulting

9:20 **Review Agenda for Day and Task Force Logistics**—Donna Silverberg
- The public will be invited to share their input through written comments.

9:30 **Follow-Up to Session Two**
- Finalize meeting/chart notes from 10/9&10
- Check-in on Progress to date and 11/5 Deadline:
  - Clarify: What needs to occur today? By 11/5?
- Follow-up on Actions from 10/9 & 10 meeting:
  - Work on small group proposals between sessions
    - How were the answers to questions 3-6 refined?
    - Did the blue and purple group merge proposals? If so, to what?
  - Significant Negative Impact criteria—refinements?
  - Minority report language re: significant negative impact?

10:45 **Break**

11:00 **Continue to Work on the Questions**
At the last session, the group worked on questions 1-6. While agreement was reached on questions 2, the group needs to finalize its responses to questions 1 & 3-6.

12:00 **LUNCH BREAK** (lunch will be provided for Task Force members)

1:00 **Continue to Work on the Questions**

3:15 **Break**

3:30 **Question (7)**
Regardless of the outcome of this process, what might be the most effective means to achieve a long-term resolution to the pinniped – fishery conflict?

4: 45 **Evaluate Session and Closing Comments**

5:00 **Adjourn for day**

Day 6-October 31

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TASK FORCE MEETING AGENDAS and NOTES

8:30 – 4:30

8:30 **Get Coffee, Get Settled**

8:45 **Opening Comments**
Task Force members and advisors will be asked to share any thoughts from Day 1 discussions. The public will be invited to share their input through written comments.

9:00 **Continuing the Work: Finalizing Progress on Task Force Charge**
NOTE: The Task Force will use this day to finalize its work on the questions required by Section 120 and those posed by NOAA. Timing of topics and breaks will be determined by the Task Force.

12:00 **LUNCH BREAK** (lunch will be provided for Task Force members)

4: 00 **Commit to Next Steps in the Process**

4:30 **Adjourn**

Thank you for your interest and participation in this process.

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NOAA FISHERIES
Pinniped-Fishery Interaction Task Force
Final Facilitator's Summary Notes

October 30 & 31, 2007
Double Tree Lloyd Center
Portland, Oregon

NOTE: The following notes are a summary of the third meeting of the Pinniped-Fishery Interaction Task Force. Questions or clarifications about these summary notes may be raised to the facilitation team.

Task Force Members Present for All or Part of the Meeting: Daryl Boness (Retired Marine Mammal Scientist), Bruce Buckmaster (Salmon for All), Jody Calica (CTWS), Robert DeLong (NOAA), Patty Dornbusch (NOAA), Doug Hatch (CRITFC), Thomas Loughlin (Marine Mammal Scientist), Deb Marriott (LCREP), Barry McPherson (American Fisheries Society), Guy Norman (WDFW), Joe Oatman (Nez Perce Tribe), Dennis Richey (Oregon Anglers), Carl Scheeler (CTUIR), David Shepherdson (Oregon Zoo), Paul Ward (Yakama Nation), Steve Williams (ODFW), Bob Willis (USCOE), Sharon Young (Humane Society of the US).

Technical Resources and Advisors present for all or part of the meeting: Robin Brown (ODFW), Garth Griffin (NOAA), Sandra Jonker (WDFW), Steve Jeffries (WDFW), Brent Norberg (NOAA), Robert Stansell (USCOE), Bryan Wright (ODFW).

Also present: Scott Bettin (BPA), Anita Bilbao (NOAA), Dave Colpo (PSMFC), Anne Creason (BPA), Julie Entrekin (Public), Barry Espenson (Columbia Basin Bulletin), Joe Frazier (AP), Michael Gosliner (Marine Mammal Commission), John Harrison (NPCC), Charles Hudson (CRITFC), Jim Ruff (NPCC), Steve Sanders (Oregon Attorney General Office), Jason Sweet (BPA), Sean Tackley (COE), John Whitaker (CRITFC), Charles Wiggins (Public)

Facilitation Team: Donna Silverberg, Erin Halton and Robin Gumpert

Day 5 – October 30, 2007

Welcome and Agenda Review–Donna Silverberg, Facilitator, welcomed everyone to the meeting and led a round of introductions. She reminded the group that the charge of the task force is to review and deliberate issues related to the application by the states of Idaho, Oregon and Washington under Section 120 of the Marine Mammal Protection Act as well as issues in NOAA's Task Force instructions. The goal of today's meeting was to merge proposal ideas generated during the last session and move into answering other questions that will be

described in the final report. She reminded everyone that deliberations are for task force members and that the public was welcome to comment in writing. One public comment document was distributed at the start of today's meeting.

Garth Griffin, NOAA, reminded the group that, while this task force has focused on threatened and endangered species, Section 120 allows consideration of those species 'at risk of becoming threatened or endangered'. He clarified that he was not suggesting that some of the fish the application has chosen not to address are at risk, but simply that he wanted to remind the group that other salmonid populations were included in NMFS' status reviews in the 1990's. For example, the Mid-Columbia River spring run was found not to warrant protection under ESA but NMFS review team had noted that several subpopulations of that salmon run were at low levels and therefore at risk. Recall, Garth stated, that Ballard lethal take actions were to protect non-listed steelhead. In response to a question, he further clarified that Section 120 specifically considers salmonids, so lamprey and white sturgeon can not be considered under this process. (It was later clarified that these and other species can be dealt with as "considerations" under Section 120 (d) "Considerations").

Guy Norman added that, within the up-river Spring Chinook stock, some are listed and some not listed but the run timing is very similar. Given this, the state makes a fisheries (and predation) management assumption that impacts will be the same for ESA listed and non-ESA listed fish.

Follow-Up to Session Two – The task force commented on the meeting minutes from the 9/9 and 10 meeting:

- Page 10: Change language to 'Even if right 'next' (not 'night').
- How will suggested changes not included in the distributed redline version be addressed? Some questions were still waiting to be answered and will be addressed in the notes (if not clarified individually off-line).
- Page 4: Robert De Long comment on dominant animal: replace 'removed' with 'vacated the feeding territory' and at the end of sentence add, 'only to be replaced by the dominant animal 1-10 days later when it returned.'
- Page 8, criteria: doubled or more in 'blank' years = 13 years. This came from the 2007 Status and Stocks Report.
- Page 10: Although there is a 'sociality among' not 'sociology to' these animals.
- Page 17: Q&A third bullet. Delete: Our guess is that in 3-6 years this will still be a problem. (This statement did not represent all views of that group.)
- Attendees – Remove Craig Bartlett from the list.

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- Name corrections: Bob 'Willis' not Wills; change 'stellar' to 'Steller'; and Steve 'Jeffries' not 'Jefferies'.

- Page 6: Latent mortality bullet: It was clarified that mortality catch and release rate is 10% in the sport fishery, 18% in commercial fishery, and that those rates are factored into the overall 2% impact on the overall run.

- Page 6: Final bullet – '2001-2007', not 2002-03, and '2% or less with one exception (one year was 2.2%)'.

- Page 4: The cost estimate for a trap is $15,000-20,000 for one, not $60,000. (The other estimate of $110,000 for the overall trap effort was accurate.)

- Page 5: Mid-page comment: "He said that spikes…' add, "and good ocean survival conditions" to 'good passage, hydro,'.

Progress to Date and 11/5 Deadline
Garth Griffin shared NOAA's perspective that the goal for the end of tomorrow's final Task Force session, was to answer the seven questions outlined– conceptually for lethal and non-lethal measures which NOAA will then flesh out. He requested that the group also continue its discussion on 'significant negative impact' and 'individually identifiable' to provide NOAA a well-rounded discussion by which to base its decisions. In addition, task force members suggested that public safety still needs to be addressed. The group was reminded that by COB November 5, a Final Report will be submitted to NOAA and the group will need to finalize it before then.

States' View of "Individually Identifiable:
Steve Sanders, Oregon Attorney General's Office, provided clarification on the states' interpretation of 'individually identifiable' pinnipeds in their application. With the goal of interpreting the MMPA to target those animals that are having a significant negative impact on threatened or endangered salmonids, and having seen no interpretation of 'individually identifiable' anywhere else, they determined that lethal take of pinnipeds which ***are*** having significant negative impact meant that specific culprits who are 'at that moment' having an adverse affect are candidates for lethal take. The states have interpreted the language of the Act such that they can take actions that will ultimately fulfill the purpose of the Act. The states' believe that it is sufficient enough that, according to the available scientific information, any pinnipeds that are at and above marker 85 are having an adverse affect. The law, he said, requires nothing further. He added that the question is not whether they are members of 'the group' but rather are individuals having an impact – branded, highly identifiable or those in the location at the time having an adverse affect. He concluded that this may not be the most intuitive interpretation of the Act, but from the states' perspective, it is the one that has the highest likelihood of accomplishing the intended results.

Task Force Questions and Comments

- 30-50% of identifiable animals are seen above navigation marker 85 but are not necessarily seen taking fish. So the states are using circular logic on this issue: why would they be up there unless to feed? Not all pinnipeds in the area are successful. So we need to be more discerning than the threshold the states laid out. A: Steve Sanders replied that the law does not require that we see them take fish in order to be deemed as having a significant negative impact. This law does not require 'beyond reasonable doubt', but still it is discerning.
- The location of observations, within ¼ mile of dam, is a much smaller area than the full area proposed for take. The pinnipeds may go downstream to catch the fish but are very difficult to observe. A task force member clarified his point: sea lions that cross that 85 marker line may never take a salmon. Particularly if they are new animals to the area. A: Steve responded that the law does not require us to see that predation, adding that the act of drawing other animals up to the area may actually be harming the fish just as much as actual take.
- The authors of Section 120 intended it to be implemented in a situation in which a small number of animals were foraging a limited area and that addressing them would adequately address the problem. The language was not intended to suggest reducing the overall pinniped population to address the problem. The states' interpretation may be too broad. A: Steve – the actual situation to which the Act is applied does not always match the intention or vision at the time of writing. What we must do is apply it to the situation at hand--which is much different than that at Ballard Locks.
- Regarding Ballard – were all animals eligible for lethal removal individually observed taking a fish? A: All animals in that situation had been named, and given profiles for why they should be taken. In addition, criteria were developed that would allow for additional take (similar to what is being developed through this process). Additional detailed information on the Ballard process is available on the CD. Generally the conditions were similar with the exception that the area is much smaller at Ballard and easier to observe, and there were longer term observations. Also, one perspective suggested that there was no direct input on the practicality of actions from the state agencies. Language for lethal take in the Ballard Locks process included 'brands, tags, natural marks, killing or eating at least one steelhead'. It was noted that in the present situation, 80% of the take of salmon is not attributable to a particular pinniped.
- It is possible that some animals are in the area and not posing a significant negative threat – the States' 'attraction theory' does not rest well with me.
- Section 120 was intended to be applied narrowly, so other sections of the MMPA – 103 and 109 – may be more appropriate to apply in this case. Steve Sanders added that since NOAA's Optimal Sustainable Population (OSP) had not been formally set during the initiation of the states' consideration, the states pursued this process as opposed to the others.

Overall, some members of the Task Force expressed that they did not agree with the states' interpretation of 'individually identifiable' pinnipeds. The group then moved on to refine other options that might serve their perspectives more clearly.

Review of Small Group Proposals:

APPENDIX C

TASK FORCE MEETING AGENDAS and NOTES

Options to Answer Questions 3, 4, 5, and 6

The task force continued discussions from the previous sessions' work developing options (Blue, Purple and Green) for answering Questions 3-6 From the '10/9 and 10/10 Chart Notes'. At the end of the last session it was proposed that the blue and purple group options attempt to merge into one more preferred option.

Purple and Blue Group Merge: Revisions were made based on the following comments:

- We are managing to 1% as a default because we do not clearly understand when we will reach a level of predation that does NOT have a 'significant negative impact'. Add that 'determination will be made on an annual basis after the first three years' to analyze whether the goal is practical and attainable and whether 1% is sufficient to address the problem.
- The critical run timeframe during which to measure the goal is January 1-May 31.
- Long term goal needs to minimize the impact to pinnipeds.
- Nothing proposed in this option would reduce pinniped predation to zero and this is very similar to harvest limits. This proposed option is no more or less restrictive than the restrictions on fisheries.
- The blue/purple group agreed on the importance of having a quantifiable goal to allow predation management to fit into the overall framework for addressing all other threats in the Columbia Basin.
- It was clarified that the proposed location for allowable lethal take is from Bonneville Dam down to the Hamilton boat ramp and straight across to 100 yards below Tanner Creek. From the states' perspective, this would be a practical application.
- Decisions to move forward should be made annually, after the first three years, based on progress made toward goals and the effectiveness of the lethal and non-lethal control methods being used.
- The ideal solution would be to limit the impact CLS's are having in three years, but this may not be practical. Make decisions now about how best to start our control and where to go from there. Options are to start with minimum lethal take and increase as needed – or start strong now and hope the problem will be limited to the point that we can decrease or stop lethal take.
- Behavior modification on foraging by remaining animals may be transferred downstream away from observations, so predation rates may still be happening outside our range. Think ahead about how we can make adjustments based on behavior modifications. This notion may speak to not building in tight constraints on lethal take in the first three years.
- Make the1% goal an interim goal, as it is currently reasonable but may not make sense later when more is known about the impacts we are having.
- Add a foot note of <u>how</u> the states will assess in the first three years, <u>how</u> to measure 1%, even if that method of assessment might change later.
- In tandem with these criteria, expand observation and other data collection area for future assessment. Also, get at quantitative criteria through additional information and analysis over time. In the absence of this information and analysis, we are making

'best guesses'. We are constrained by that and the time frame allowed for this Task Force work. With that, I am not comfortable with building in more flexibility on the goal at this point.

- Note the resources do not currently exist to gather that information so support for this further data collection and analysis would need to be matched with fiscal resources.
- Caution not to restrict ourselves with metrics, considering resource constraints. Resources we apply here will mean not applying them elsewhere so, practically speaking, don't want to address long term and increasing resource needs. (Others agreed Section 120 was not set up as a long term mechanism to address the problem.)
- For the list of candidates 'suitable for lethal take', a table will be developed to clearly show which CSL's are eligible, and where.
- The 'F' bullet, notorious (identifiable and 30 salmon or 3+ years observed in 85 to dam area 85/anywhere except breeding grounds), would mean about 57 CSL's.
- The blue/purple group clarified their thinking on the A-F list of appropriate candidates: Practical implementation was considered, also wanted to include criteria for candidates before going on the water to observe for take, and those criteria for observations on the water for take, and 'after the fact' criteria. (So, some candidates by these criteria are already on the list, others will be observed on the water, and still others may be later added to the list.)
- Need to clarify 'protected' area. It is not clear.
- Need clearer criteria for moving from a protected list to a candidate on lethal take list.
- Under 'other issues': Recovery of carcasses goal was meant to maximize hazing and the ability to take those actively feeding. A suggestion was made to couple this with the overall recovery effort. Additional suggestions were made to add regular Task Force meetings after the first year of implementation; and to add a measure of success as 'reduction in the documented presence of sea lion and subsequent take.'
- Suggestion: use AVMA guidelines for use of firearms of sufficient caliber instead of 'shotgun', and also don't limit the location just from boats. Both are unnecessary restrictions. No objection was made to this change, although it was noted that the AVMA guidelines that discussed firearm use related to conditional approval for their use for stranded small cetaceans and did not cover pinniped take.
- Add 'lethal injection' as a method of take and other appropriate methods approved by the Animal Care and Use Committee (IACUC).
- As a practicality, my experience has been just one marked animal observed from a boat – so from the list, A and E are most likely to be taken from somewhere other than the water.
- How possible is it to recover carcasses? Trap from haul out sights would be near 100%. In the water, maybe 50%. Note 40-50% are immediately recoverable; others are found later and useful for skeletal info, GI tract studies, aging, etc.
- As a practical matter, it might be difficult to remove the CSL if take happens in the fish ladder. Change language to 'has occupied a fish ladder'.
- Is reconvening the task force practical and appropriate? Yes, Section 120 says this is an appropriate action.

APPENDIX C

TASK FORCE MEETING AGENDAS and NOTES

- Is your '5-year declining trend' *measure of success* inconsistent with the 1% as a 3-year rolling average *goal*? One is a qualified goal for a specified area, the other is looking at the broader trend effects on salmon populations as a whole. So a decline of predation could be a measure of success in making progress even if not fully meeting the goal. It was noted that, as a practicality, the trend should be greater than 3 years.
- Add 'concurrent with implementation of this 3 year effort, also implement a monitoring component of the overall impacts of pinniped predation on salmon populations.' Also, concurrent with this, develop a lower river pinniped management plan for the long term in addition to section 120 – a more comprehensive approach to pick up where we left off. (This concept could go into Question 7, as well as included in this option as context).
- Change 'protected area' to 'CSL exclusion zone'.
- Calculation of predation rate of 1% or less – is this meant for all salmonids? Yes.
- Change 'measure of success' to 'method of evaluation'.
- When do we know when to stop? Use of goal is to know that when achieved, we stop with lethal take. Method of evaluation/measure of success is too vague to let us know where the threshold is. Suggest removing this bullet and just leave goal at top as 'measure of success', and do evaluation in three years to determine what to do next. Another perspective on this is to include the goal to show a measurement in a short time frame through which to determine progress toward success. Suggestion: 'additional criteria for measuring progress toward achieving the goal'. Support for comprehensive approach and that might require an interim measure of success or progress toward goal. For purposes of Questions 3-6, don't address comprehensive longer term goal as it does not apply to section 120? The group generally agreed to take this comprehensive, long-term piece out of the option**.**
- Once on the lethal list, always on the lethal list? Yes that is the assumption.
- The goal is two-fold: Remove the minimum number of animals necessary to accomplish the first goal of reducing predation on salmonids. From the perspective of limiting the recruitment of additional animals to Bonneville Dam, 1% of PBR goal may not work. More and more animals will show up, so the quicker you eliminate them from this area, the fewer you will need to take in the long run. Some task force members agreed with this sentiment: and if so, perhaps stopping at 1% as a hard constraint would mean failure under Section 120 if we don't get there with this parameter. Long term goal of section 120 may not be achieved.
- The task force members agreed that there is a fundamental disagreement over whether removing the majority of pinnipeds in the area will have a long term deterrent effect. And, whether if, in three years we reach our target of 1% or less, we would stop all lethal activities. Risk with a yes answer is that the numbers will start going back up. (Those that said no suggested a 6 year implementation and evaluation period, not just three, and clarified that lethal take would stop in year 4 ONLY if the 1% 3-year rolling average goal is met, but that lethal activities could resume in year 5 and 6 if the 3-year rolling average was above 1%.) With these fundamental differences in opinion, the group agreed to submit alternatives for NMFS to choose from.

- Clarification: 1% in the goal for the purple/blue option references a change in salmonid predation, not population of pinnipeds. (1% of PBR was discussed in the states application – there was confusion here).
- Consider that fish runs are a moving target year to year so it will be difficult to determine year to year the predation reduction from our efforts. This should not be the trigger to stop implementing our strategy. (An added perspective is that if we do NOT reach our 1% target, we need to reevaluate and consider changing our actions.)
- Speak to pinniped predation similar to other limiting factors in the broader mitigation context: X amount of pinniped predation is allowed (allowable take) to match X amount of sustainability of the threatened and endangered salmonid population. (ODFW suggested this might not be possible because CSL predation is a 'new' limiting factor and therefore we are starting at an acceptable level of "0". Also, Section 120 may not be an appropriate process for addressing long term recovery goals – we are only addressing the acute issue.)

Green Group:
There was some discussion of the Green Option (please note: this is **Option Two** in the report) and it was revised to the following:

GOAL: Reduce CSL presence to zero above navigation marker 85, reduce predation to less than or equal to 0.5% in the observation area used to date below Bonneville Dam.

Remove the minimum number of pinnipeds necessary to achieve the above goal over the long term. The management goal is to affect and reduce the number of recruits to the area below Bonneville Dam.

Zero tolerance in the Sea Lion Exclusion Zone

Q 4) Lethal removal of up to 2% of the PBR to achieve 0 sea lions above navigation marker 85 will have no impact on the reproductive efficiency of the population. This higher take limit than applied for recognizes that there may be more than 85 sea lions at Bonneville (1 % of PBR) in the first year of a lethal removal program.

Q 5) From January 1st through May 31st, take all CSLs above navigation marker 85. Highly identifiable individuals (e.g. branded with a history of predation or multiple day presence, as listed on table 3.3) could be taken elsewhere in the Columbia River. The methodology should be at the discretion of the states and consistent with humane methods. Duration: 5 years.

Q 6) To measure success, 0 to low abundance of Cal. Sea Lions at Bonneville Dam and predation <0.5% of the salmonid run over the dam January 1 through May 31st (steelhead & others combined).

APPENDIX C

TASK FORCE MEETING AGENDAS and NOTES

(NOTE: This option was "Preferred" by 7 of 18 members, "Acceptable" to 15 of 18 members, and "Unacceptable" to 3 members).

Third Option: No lethal take:

A third, 'no lethal take' option was put on the table for consideration. (Language on this option was developed and addressed during Day 2 of this session of Task Force deliberations; see below for more detail.)

Day 1 Closing Comments
The Task Force members agreed to look at the October 9-10 Meeting Summary (pages 19-21) to review and consider language for 'significant negative impact' criteria, to be discussed and finalized the next, final day. The facilitator thanked everyone for their participation and the meeting was adjourned at 4:45 pm.

Day 2-October 31, 2007

Welcome/Opening Comments: Facilitator Donna Silverberg, DS Consulting, welcomed everyone to the second day of the meeting. Task Force members and advisors were asked to share any thoughts from Day 1 discussions. Members of the public were invited to share their input through written comments. Donna reviewed what was left to discuss today:

- Finalize significance issues
- Review blue/purple option
- Review non-lethal option
- Discuss public safety issues
- Re: Lethal – if yes, should non-lethal be concurrent, prior, or not at all?
- Question 7 (including additional long term monitoring)
- Draft Report input

Opening thoughts:
Garth Griffin, NMFS, expressed appreciation for the professionalism of the group in sharing their ideas and expertise, noting that this process was more constructive and less divisive than deliberations over Ballard Locks. "We have all benefited from the effort and energy of this Task Force", he said. Thanks went especially to those that are volunteering their time, and also to the technical resources and the facilitation team.

Blue/Purple Option (*Note: this is Option One in the Final Report)
After yesterday's meeting, further work was done on the 'Blue/Purple' option. Comments included:

- It was clarified that the action will be directed specifically at 'California Sea Lions'. (This change will be made to all options developed by the Task Force.)
- Justification is needed for 1% criteria: Page 14, Table 4, of the states' application. Shows predation for some salmonids is already below 1%. Others agreed on the difficulty of assessing impacts given the variation in run size vs. CSL take. But, given

the requirement from Section 120 to be able to observe a 'significant negative impact', we need to understand that impact.

- Reminder that predation is a natural and normal behavior for sea lions; coupled with the human caused impediment to the salmon run (the dam), there is a problem.
- Concern that this option does not include measures for a catastrophic collapse in the salmonid run. It has not considered certain stocks that have populations with below 100 return rates, and others at higher risk (e.g. earlier returning stocks). So, suggest building in a mechanism for taking more aggressive action in the face of a 'catastrophic' decrease in run size to go below 1%. Other areas take action on collapsing runs, e.g. harvest. One suggestion: 'During the first three years, if the run size drops below xx (50k?) in two consecutive years, manage to a lower level (0%?)'. Once the numbers return to above 50k, resume with the 1% criteria. It was noted that, in this option, for the first three years, lethal take to the maximum would be allowed.
- We need to be conservative, so setting a 1% goal for just three years is insufficient to meet the Section 120 goal. Instead, we need to put an action in place that says in the worst case scenario, this limiting factor will not have a significant impact. (1% is too high.)
- One option to address: Use CSL predation rate (3.4% in 2005) to manage against. Or, use the co-managers run forecast as a scale from which to determine aggressiveness of lethal take action. If numbers are low (80k) then choose different action than if numbers are higher. Question: Would this more appropriately be placed as criteria on the 'suitable for lethal take' list in this option?
- Note that with the lower run size we will need to be more aggressive in lethal take if it is a percentage, so suggest developing a more liberal set of criteria when run sizes are larger. From a practical standpoint, identifying those CSL's suitable for take is going to be the more difficult thing to get at.
- ESA says manage to weakest stock; in terms of fishing, we are not allowed to take any of those weak stocks. Build ESA triggers into this process. Total numbers are not important, individual numbers of weak stocks are.
- Salmon are the center of our tribal religion and culture, diet, and commerce. With these stocks on the cusp of extinction, and in the context of our tribal needs, concern that this approach is too complex and difficult to implement. The burden will come back to bear on the spring Chinook population and in turn, the tribal population. This is not acceptable to us. Tribal treaties predate the MMPA.
- 1% in terms of 'significance': we do not have the information to say what is significant. If catastrophe does occur, this may mean lethal take of sea lions ISN'T going to get us there, and that we need to redirect our focus altogether, away from Section 120.
- The fluctuation in run size is so great that a 1% threshold is not extreme either way. Suggestion: set the level of mortality for 'worse case scenario'. So, 1% is based on observed take AND 'assuming worst case scenario for the salmonid population.'
- Re: the limit of CSL take up to 1% PBR. This may need to be altered for times when salmonid run sizes are very small. Address 'catastrophe' through this criteria. It was also noted that the number of animals on the Table 3.3 list are already above the 1%

PBR, so there may be inconsistencies in the two criteria. Question: Is it conceivable to 'take' all the animals on Table 3.3, from a practical standpoint? ODFW answered that the ability to implement this option is not known at this point, as it is unprecedented.

- Question: Are the states willing to increase PBR allowable to 2%, as opposed to application for 1%, for crisis years? Follow-up question, what defines crisis?
- Clarified that management is toward limiting numbers of run sizes (threatened and endangered) not total run sizes.
- 1% of 80,000 fish IS 'significant' to the Warm Springs Tribe. The Tribe is making significant contributions across organizations and actions to recover the fish, and needs certainty of the soundness of our work here.
- The Nez Perce Tribe stated that by looking at only the Upriver Spring Chinook run size does not give the big picture on the effects of California Sea lions on fish. We need to look at the Upriver Spring Chinook run size and the Snake River component in combination. The fishery co-managers use a harvest rate schedule based on these run size scales to determine harvest on fish and the impacts to Snake River spring/summer Chinook. Only a portion of these fish make it back to Lower Granite Dam on the Snake River. The Nez Perce Tribe has been constrained over the past 20-30 years in terms of management of tributary harvest except for in hatchery influenced areas. The Tribe is located the furthest up the Columbia Basin and Snake River salmonids have been in decline. We are not allowed to fish in many of our usual and accustomed areas due to depressed populations even though this was guaranteed by our treaty. Many of our salmon stocks are below identified viability levels. So, take a deeper look into what 'significant impacts' means.
- In terms of fecundity, even 1/8 of 1% is a measurable difference for salmon populations.
- A possible solution to addressing 'catastrophic' years: Use the predicted run size as a threshold, e.g. 82k above Bonneville spring Chinook. If the run size is less than that threshold, 'suitable for removal' criteria would change to something closer to what has been offered in the Green Group option (Option Two) – more liberal allowable lethal take. Year by year, not rolling three year average. So, 'any animal above 85 navigation marker' during these years. During these years, this new criteria would trump the other A-F criteria.
- Taking more aggressive action with a lower run size is not inconsistent with measuring to a 1% run size. On the other side, the suitable take criteria are restrictive enough not to allow us to reach 1% PBR. So, leave the goal and take criteria as is.
- Ok with building in an option to lift the 1% criteria if predicted run size is below 82k. (At least one task force member felt uncomfortable lifting the 1% criteria, given the uncertainty of the true impact on the salmon run lethal take of CSL's will have. Suggest keeping the reevaluation in so outcomes after three years can be considered for future management action.)
- ODFW reminded the Task Force that the PBR is a very conservative number so there is NO risk of affecting OSP. They also suggested there has been too much focus on PBR. Instead, suggested language 'up to a number of animals equivalent to 'PBR' number', since PBR is not set for this particular activity. We risk criticism with too

much emphasis on a number that is not meant to address this activity. The states' application of up to 1% of PBR was included as a reference point or example, not a specific goal.

Given the comments from the last two days, the group revised the Blue/Purple Option to the following: **(Please note in the Report, this is Option One).**

Blue/Purple Option
Guiding Principle: Remove the minimum number of California sea lions necessary to achieve our goal over the long term. The management goal is to affect and reduce the number of CSL recruits to the area below Bonneville Dam by using non-lethal and lethal actions.

Interim Goal: Reduce CSL predation on salmonids in the observation area used to date below Bonneville Dam to a rolling 3-year average of 1% within 6 years (based on the current January 1 – May 31 COE monitoring program).

- Lethal take will occur in the first three years and can continue ONLY if the rolling 3 year average exceeds 1%, unless new information suggests the need to change this criterion or unless the Upriver Spring Chinook run size is predicted to be 82,000 or less. This decision should be made on an annual basis after the first three years.
- This goal should be reevaluated at the end of the first three years based on new information collected.
- 'Sea Lion exclusion zone' description: From Bonneville Dam down to a line extending from the Hamilton Island boat ramp straight across to a point 100 yards downstream from Tanner Creek.

Suitable for Lethal Take (area where animal was observed/lethal take area):

E. Identifiable CSLs (marked, tagged, branded, or with identifiable natural marks) that have been observed to have caught a salmon in the "protected area" below Bonneville Dam (PA/85); or
F. All animals on Table 3.3 may be taken (PA/85); or
G. CSLs that have occupied a fish ladder or the area within 50 feet of a fish ladder (PA/85); or
H. CSLs seen eating a salmon in the protected area [spontaneous: can be killed on the spot while eating or attempting to eat salmon] (PA/PA); or
I. Present/documented on a total of any 7 days in the marker 85 to Protected Area boundary and observed taking a salmon (85/85); or
J. Notorious [identifiable and 30 salmon or 3+ years observed in 85 to dam area] (85/anywhere except in a rookery).
K. If the predicted run size of Upriver Spring Chinook is 82,000 or less, then any CSL above marker 85 may be taken.

Number of CSLs allowed to be taken a year: Up to a number roughly equivalent to 1% of PBR; managers may decide to take less based on in-year assessment and will strategize to minimize take.

Other issues:

- Method of take should be humane:
  - Use appropriate firearms or lethal injection or other methods deemed appropriate by the IACUC.
- Recovery of carcasses: coinciding with monitoring and control efforts, make all reasonable and practicable efforts to recover.
- Lethal take must be done in a manner likely to maximize the effectiveness of hazing.
- Marking of CSLs will be emphasized to increase effectiveness of actions as identified in 'suitable for lethal take'.
- The Task Force should meet and evaluate after the first year of implementation.
- Concurrent with implementation of this---an in-depth M & E of overall fish impacts from pinniped predation in the Columbia River.
- Concurrent---develop a Lower River Pinniped Management Plan for longer term, ecosystem based management.

(NOTE: this option was "Preferred" by 10 of the 18 task force members, "Acceptable" to 17 of 18 members, and "Unacceptable" to 1 member)

Garth Griffin asked the group a question relative to Table 3.3: Both options include those in Table 3.3 as candidates automatically on the list for lethal take. He clarified that 40-50 of those listed have NOT been documented killing salmon, but have been observed in the area for at least one year, which means that if either option were to be implemented, all those on Table 3.3 would have been in the area for a minimum of two years. So these animals are 'identifiable and present' – not necessarily known predators. Is that what is intended? Yes. (The blue/purple group recommendation says they ALSO need to have been observed in the "sea lion exclusion zone." The green group recommendation says 'presence above navigation marker 85' is enough).

Non-Lethal Take Option (*Noted in the *Alternative View*/Option Three of the Final Report): Sharon Young provided a handout with the non-lethal option and rationale, and clarified that the rationale would need to be developed further for purposes of the final report.

The statement read:

Brief rationale for opposing lethal take of pinnipeds:

The situation at Bonneville does not appear to meet the intent of Section 120, which applies to individually identifiable pinnipeds that are having a significant negative impact to on the decline or recovery of salmonids. Section 120 is intended to reduce levels of predation to levels that are not significant. There

were no data provided to substantiate that the current level of predation is having a "significant" effect or, contrarily, what level would NOT be significant.

There are myriad factors in the decline that remain insufficiently addressed to permit the desired rate of recovery. Predation occurs at levels well below that of other extractors (both in-stream and ocean intercept) whose take has been permitted by NMFS – presumably because that take is not considered to be having a significant (harmful) impact on the runs.

Further, there are 151 "highly identifiable" pinniped individuals on table 3.3 and over 271 identified individuals who have been seen eating fish. Each year, dozens of new individuals are marked or identified at the dam who have not been previously seen. In addition, the number of California sea lions in the Columbia River (variously estimated at more than 1,000) is such that removing even the identifiable individuals is unlikely to be successful in "eliminating the problem interaction;" something which we are asked to evaluate after lethal take has occurred. More sea lions will simply take the place of those that are killed; necessitating killing more sea lions each year in perpetuity.

Section 120 is not appropriate for use in this type of situation. Other sections of the Act are more appropriate.

Task Force Member Comments and Question on Non-lethal Option:

- If Section 120 is not appropriate, what do you suggest? Sections 103 and 109 seem more appropriate.
- Disagree with sentiment that we do not have sufficient data to suggest the significance of the problem. We have been given a lot of information to speak to that significance. A: the *level* of significance has not been defined.
- The weight of evidence, even without quantitative data, shows confidence in the significance of the current problem, but there is less confidence around where we need to go to get to 'not significant', as is required by Section 120. We need to test this process to see if it results in a solution.
- Other 'threats' use a comprehensive approach to determining a reduction in negative impact. We left behind 'predation' as a quantifiable/degree of responsibility in comprehensive package due to uncertainty with the data set. So we are targeting CSL predation as a limiting factor needing to be addressed that we will later fold into the fuller context of salmon recovery.
- Disagree with the rationale statement that predation occurs 'well below other levels of extractors.' The levels are not quantified and the data for other extractors like ocean harvest includes fish all along the coast, not just Columbia River salmonids.
- For purposes of looking long term at the usefulness of MMPA, we should include this option in the final report.
- Suggest revising language in the statement to say the current data 'leaves open to question' whether current level of predation is having a 'significant negative impact'.

- NOAA, by convening this task force, already determined that this is an appropriate situation in which to use Section 120.
- This is not an 'option' to address the problem through Section 120. NMFS already has a no action alternative. Simply saying there was one member who doesn't approve lethal take already speaks to the no action recommendation. Include as a minority report.

Next Steps for the Non-Lethal Alternative: Some Task Force Members felt that all three options should be presented for NMFS to choose from; others felt that the non-lethal action was not a recommendation from a majority of the group and therefore should not be presented in the report. Given that more work was going to be done on the rationale behind this proposed alternative, and based on further discussion, a majority of the Task Force agreed that the rationale of the no lethal take alternative should be included as an appendix to the report. The rationale will be submitted as the view of one member of the task force. The report will clearly state that the other members did not have an opportunity to discuss the final written statement. A member of the task force pointed out that the decision to merge the options of various groups was left to the last day of meetings and thus it left up in the air until this day what the final recommendations would be; as such she felt there was no time provided for a meaningful discussion of the no lethal take option.

One Task Force member expressed disappointment in the process for including the non-lethal option as an appendix to the report, suggesting that the other two majority opinions were not reached by consensus and therefore should not be given more weight than the non-lethal option.

Next Steps for Blue/Purple and Green Options:
The Final Report will say that all but one Task Force member agreed with the states' application to move forward on lethal take actions under Section 120, and two options for lethal take were developed. (Note: The blue/purple option is called 'Option One' and the green option is 'Option Two').

Revisiting the "Significant Negative Impact" Criteria: From the last session of meetings, and after reviewing the versions developed prior to today's session, task force members offered comments:

- Version 1 is most complete based on our discussions
- Support Version 1, with some edits
- Version 1 is not defensible based on data we have.
- Version 2 includes criteria that NOAA has asked for.

A suggestion was made to include the preamble from Version 1 into Version 2 and work from there. Working from this, Task Force members offered comments and suggested revisions:

- Reverse order of preamble to say that the 'majority of task force members agreed…' followed by 'however, the Task Force was unable to agree on quantifiable criteria…'

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- Include that predation at BON is a recent phenomenon.
- Criteria needs to relate to the area we are considering, not the full river.
- Be cautious using the 4% predation rate since salmon run fluctuations will alter that rate of predation (the total numbers of which might remain constant).
- Change questions to statements as sub bullets under second question bullet: CSL predation IS a recent phenomenon, current predation rates ARE expected to go up, CSL scat sampling CONFIRMS that salmon… etc.
- Criteria should reflect that the impact of predation on salmonids is greater on smaller run sizes.
- From Version 1: Include # 5 and 6: Highly identifiable CSL at and near the dam confirm that certain individuals consume large amounts of salmon; and these same individuals have been documented to occur at the dam and nearby waters in numerous years and often remain feeding at the dam for as long as a month.
- Change 'baseline' to 'historic' levels.
- Change pinnipeds to CSL's throughout document.

With the above suggestions and changes made to Version Two, the Task Force members present (one member was not present during the vote) agreed to the following set of criteria for determining 'significant negative impact':

The majority of the task force inferred that California Seal Lions (CSL) are having a 'significant negative impact' on the recovery of Columbia Basin threatened and endangered salmonids based on the overall weight of evidence from discussion of the suggested criteria listed below. However, the Task force was unable to agree on quantitative criteria to assist NMFS in defining 'significant negative impact' due to the ambiguity of the phrase as used in the 'Act', and the type and limitations of data available.

Criteria which NMFS might use in the interpretation of significant negative impact include:

- Timing: are pinnipeds present at the same time that ESA listed salmon are migrating?
- Does the data at BON and existing science on CSL indicate that predation has increased beyond historic levels?
    - CSL predation upriver spring run salmonids at Bonneville Dam is a recent phenomenon.
    - Observations of predation at the dam (4.2% observed in 2007) are known to be minimum estimates.
    - Observations of highly identifiable CSL at and near the dam confirm that certain individuals consume large numbers of salmon. These same individuals have been documented to occur at the dam and nearby waters in numerous years and often, while feeding at the dam, remain there for a month or longer.

  - Scars and injury rates, as measured at BON, have increased in recent years resulting in some unknown delayed mortality.
  - CSL scat sampling near the dam confirm that salmon are the major component of the CSL diet (95%).
  - CSL are indiscriminately taking prime reproductive wild/listed fish that are concentrated and delayed by the existence of the dam.
  - CSL predation is likely to pose greater biological risk to salmonids at smaller run sizes.
  - Non-lethal hazing has been ineffective at reducing predation.
- Is the problem likely to persist over time if the impact remains unchecked?
  - Reducing pinniped predation will likely result in measurable improvements that contribute to salmon recovery.
- Is the percentage of ESA listed salmon mortality comparable to other forms of in-river mortality that currently are being managed?

Other considerations for taking action:

- CSL predation should be addressed and its impacts evaluated in context of other limiting factors (i.e. not on their own)
- There is no long term negative impact on CSL populations
- There is a comprehensive salmon recovery framework that includes actions, monitoring and evaluation
- Abundance: CSL are within the range of OSP and may be at carrying capacity.
- The problem is related to/resulting from human caused factors.
- NOAA and other regional entities should secure funding to support these efforts.

Non-Lethal Actions:

Garth Griffin asked for further clarification on the use of non-lethal actions relative to the options that were developed. He asked what level of non-lethal take should occur before moving to lethal? Should non-lethal and lethal actions occur concurrent with one another or should non-lethal actions be discontinued when lethal actions are initiated? The two groups responded separately.

Blue/purple Option (Option 1): Non-lethal hazing is not a prerequisite for lethal actions. Non-lethal actions are a tool to be used in conjunction with lethal removal; level and timing is left to the discretion of the management agencies. Need to see numbers of effectiveness.

Green Option (Option 2): Non-lethal hazing is not a prerequisite for lethal actions. Non-lethal actions should be used as a tool left to the discretion of management agencies, and should be adapted for maximum effectiveness.

A further suggestion was made by some Task Force members: In advance of initiating any lethal action, the state management agencies should form a sub group to investigate the effectiveness of lethal and non-lethal removal techniques.

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Public Safety Issues

Garth Griffin noted that the states included a paragraph on page 15 of their application regarding public safety. The group generally agreed it should be included in the final report. Additional comments:

- Several boats have been sunk by sea lions boarding or attempting to board the boat while fish are on the line.
- It was noted that the states' regulations re: handling catch and release for sport fishing requires fishers to leave the fish in the water—leaving them exposed to danger from sea lions.

Question 7: Long Term Ideas

Regardless of the outcome of this process, what might be the most effective means to achieve a long-term resolution to the pinniped – fishery conflict?

By consensus, the Task Force recommended the following option:

- Enhance monitoring and evaluation at Bonneville Dam and throughout the lower river.

Additional options were generated:

- Continue to pursue other non-lethal technologies
- Look at other measures within MMPA that could effectively manage the problem
- Pursue all measures to recover fish
- Pursue modification of the MMPA – to be less arduous process (e.g. when OSP is reached – management plan developed similar to MBPA. NMFS and Congress.
- Include clarity in SNI
- Convene task force to discuss recommendations re: modifications to MMPA and pinniped/fishery conflicts. Not specific to Columbia River.
- Consider alterations to mouth of river jetties to discourage haul out.

All options above will be included in the Final Report.

Final Report

To address the 'weight' of support for the three options generated, the Task Force showed hands:

Purple:/Blue (Option One): 10 preferred

Green (Option Two): 7 preferred

No-lethal take alternative: 1 preferred

Additional edits were made to the report at the meeting and captured real-time on the screen. All changes made at the meeting were removed from red line text and 'accepted'

in the document. Any new changes will be included in red-line in next draft sent out the afternoon of Thursday, November 1.

Conclusions

Donna Silverberg offered her observations on what the group had accomplished in its 60-day period of work together:

- Consensus was reached on non-lethal approaches and on the need to enhance monitoring and evaluation;
- The group moved from four options to three.
- 17 of 18 said the CSL's are having a significant negative impact on threatened and endangered salmonids in the Columbia River;
- 60 plus pages of summaries of Task Force deliberations was developed for the record.

She acknowledged how far we have come in our efforts, the level of respect shown throughout the process; and the high quality work of the group and its resource advisors produced as valuable information for NOAA to make its decision.

Guy Norman, WDFW, added thanks to: NOAA for accepting the states' application to move forward with the Task Force; the time and effort from all the professionals in the room; and the facilitation team for their efforts. He said he learned great deal about marine mammals thanks to education from all the experts in the room.

Steve Williams, ODFW, echoed comments already heard. He added that he was extremely impressed with the knowledge and skill brought to the table; He also added thanks to technical staff that brought information forward for the task force to consider.

Next Steps

Garth Griffin shared that the final report will be posted on NOAA's web page next week. NOAA will develop a draft Environmental Assessment and allow for 2 week public comment in January 2008. Once this is complete, they will do their NEPA and ESA work. All of this will be followed by NOAA's 'Finding', estimated for March 2008. If approved, the region will move into the implementation phase. This phase will depend on the level of financial and human resources available. As was noted earlier in the process, at this point there is enough funding to cover continued marking at Astoria--but not much beyond that.

Garth closed by saying he felt all points and considerations have been sufficiently covered by this Task Force and again expressed his appreciation, on behalf of NOAA, for their efforts and contributions. He especially thanked the number of task force members who participated without any kind of remuneration from an agency or organization. He said he was uncertain about whether or not NOAA will put out a press release on this report. They want to do all they can to avoid any confusion that may arise by the public about this Task Force's recommendation and NOAA's final determination.

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ACTION: DS Consulting will have a Draft Report completed by 4:00 November 1 and will distribute it to Task Force members for review.

ACTION: Task Force members will provide comments on the report ASAP, no later than end of day Sunday, November 4. All will need to provide final approval on the report from the member or their pre-determined alternate on Monday, November 5. The report is due to NOAA at 5:00 pm on Monday November 5.

In conclusion and to be clear, the Task Force took a final vote on whether to approve the states' request: 17 approved, 1 denied.

With a final round of thanks, the meeting was adjourned at 4:25 pm.

These notes respectfully submitted by the facilitation team at DS Consulting on 11/1/07.